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BULLETIN

OF THE

DEPARTMENT OF LABOR.

No. 1—NOVEMBER, 1895.

ISSUED EVERY OTHER MONTH.

EDITED BY
CARROLL D. WRIGHT,
COMMISSIONER.

OREN W. WEAVER,
CHIEF CLERK.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1895.

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CONTENTS.

	Page.
Introduction.....	5-8
Strikes and lockouts in the United States from January 1, 1881, to June 30, 1894.	9-25
Strikes and lockouts in Great Britain and Ireland in recent years.....	26-35
Strikes in France in recent years.....	36-41
Strikes in Italy in recent years.....	42-44
Strikes in Austria in recent years.....	45-47
Private and public debt in the United States, by George K. Holmes, formerly special agent in charge of division of farms, homes, and mortgages in Eleventh Census	48-59
Digest of recent reports of state bureaus of labor statistics.....	60-83
Connecticut	60-64
Indiana.....	64-69
Michigan	69-71
Minnesota	71-77
Missouri	77-80
Wisconsin	81-83
Digest of the report by Miss Collet on the statistics of employment of women and girls in England and Wales.....	84-94
Employer and employee under the common law, by Victor H. Olmsted and Stephen D. Fessenden, of the Department of Labor.....	95-107
Bureaus of statistics of labor	108-111

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INTRODUCTION.

During the last session of the Fifty-third Congress Hon. Lawrence E. McGann, chairman of the Committee on Labor of the House of Representatives, introduced a bill (H. R. 8713) providing for the publication of the Bulletin of the Department of Labor. This bill was referred to the Committee on Labor January 29, 1895, and February 1 the committee made the following report, which was committed to the Committee of the Whole House on the state of the Union:

The Committee on Labor, to whom was referred House bill 8713, have had the same under consideration, and beg leave to report that the bill provides that the Commissioner of Labor shall publish a bulletin of the Department of Labor, at intervals not to exceed two months, containing current facts as to the condition of labor in this and other countries, condensations of state and foreign labor reports, facts as to the condition of employment, and such other facts as may be deemed of value to the industrial interests of the country.

The following communication from the Commissioner of Labor, Hon. Carroll D. Wright, sets forth potent arguments in favor of the passage of the bill:

DEPARTMENT OF LABOR,
Washington, D. C., February 1, 1895.

MY DEAR SIR: I have the honor to acknowledge the receipt of your letter of yesterday, inclosing a copy of bill (H. R. 8713) providing for the publication of the Bulletin of the Department of Labor, with suggestion that you would like my views thereon.

In response I have to say that I have very carefully examined, not only the bill, which seems to me to be fully adequate for the purpose for which it is intended, but the plan for which it provides. The Department of Labor is authorized by its organic law to publish an annual report, and also such special reports as may be deemed best, either by the Commissioner of Labor or in response to resolutions of either branch of Congress or a request of the President, and it has in the past fully complied with these provisions, sending to Congress annually a report relating to some specific and extensive investigation, and also various special reports not requiring so extensive work as the annual reports.

I suppose the Department would have the right to make a special report at regular intervals, but in order to do so it would need a larger appropriation than that now made for its use. Your bill, therefore, supplies this lack, and further, it would enable the printing office to bring out a regular bulletin without the necessity of delay in sending it to Congress. After very careful consideration of the whole subject I therefore feel like indorsing fully the purpose of the bill, especially as foreign governments are now doing precisely what your bill aims to accomplish. The English

department of labor, which was established only recently, is now publishing, very successfully and with great acceptance to the industrial interests of the country, a labor gazette. The French department of labor does the same thing, and so, too, does that of New Zealand, and now the Russian government, which has recently established a department of labor, is publishing a gazette. It would seem right, therefore, that the United States, which has been the pioneer of labor departments in the world, should publish a bulletin.

This would have been done before, I presume, had it not been for the suggestion that such bulletins should contain information relative to the lack of labor in different parts of the country. I believe that all now agree that such announcements from an official source would do more harm than good, and therefore the movement has never taken shape; but the publication contemplated by your bill avoids this particular, and to my mind objectionable, feature of a bulletin, and with this objection removed I think it would be greatly for the interest of the industries of this country that such a bulletin should be established.

Should you look for precedents in our own government, you will find them in the Department of Agriculture, the Geological Survey, and the Bureau of Education. All of these offices, while not publishing bulletins at regular intervals, publish them quite frequently, and they are of very great use.

I think our Department is now so constituted that it could bring out at least bimonthly the bulletin contemplated by your bill, and fill its pages with most useful facts relative to the condition of labor in this and other countries—facts which do not naturally and would not generally come within the scope of an annual report. Here would be the great use and great advantage of the bulletin. The annual reports must necessarily be the results of patient and laborious investigation. The bulletins would contain more fragmentary matter, but yet of vital importance. As I read your bill, it is not contemplated that a bulletin should contain theoretical matter or introduce discussions on debatable questions, nor should it become the organ of any propaganda, but its whole function is to be confined to the collection and publication of current but important facts.

The increased expense would be so small that I should not suppose that would stand in the way of the passage of the bill. I am very glad to see that your committee has reported it favorably, and I hope it will secure the favorable action of Congress.

I am, very respectfully,

CARROLL D. WRIGHT,
Commissioner.

Hon. LAWRENCE E. MCGANN, M. C.,
Chairman Committee on Labor, House of Representatives.

Your committee therefore recommend that the bill be passed.

The bill which Mr. McGann introduced, and which the committee reported favorably, provided for a bulletin at intervals not to exceed two months and not to exceed 100 octavo pages; and to contain current facts as to the condition of labor in this and other countries, condensations of state and foreign labor reports, facts as to conditions of employment, and such other facts as may be deemed of value to the industrial interests of the country. This bill passed the House of Representatives February 26, 1895, and was favorably reported in the Senate, but instead of its passing the Senate as a bill, it was incorporated, in an abbreviated form, as a provision in the act making the appropriations for the Department of Labor, as follows:

The Commissioner of Labor is hereby authorized to prepare and publish a bulletin of the Department of Labor, as to the condition of labor in this and other countries, condensations of state and foreign labor reports, facts as to conditions of employment, and such other facts as may be deemed of value to the industrial interests of the country, and there shall be printed one edition of not exceeding ten thousand copies of each issue of said bulletin for distribution by the Department of Labor.

This amendment was accepted by the House and the bill containing it was approved March 2, 1895. It is under this provision of the legis-

lative appropriation act that the Bulletin of the Department of Labor is issued.

It will be noticed that the authorization under the legislative appropriation act is somewhat different from that contained in the bill as it passed the House. In that bill there were limitations as to issue and intervals of issue, but the law as it stands contains no limitations nor restrictions either as to the size of the bulletin or the intervals at which it shall be published, the only condition being that not more than 10,000 copies of each issue of the bulletin shall be printed. Notwithstanding this broad and unrestricted authorization, we feel it right and just to conform, in a general way, to the terms embodied in the House bill. We shall therefore undertake to limit the size of the bulletin to about 100 octavo pages and, at present, to issue it every other month. The principles which will guide us in the preparation of the bulletin are fully indicated in the letter to the chairman of the House Committee on Labor just quoted. We need not, therefore, make any restatement on that point.

Our plan now is to have at least five regular departments of information in each issue, as follows:

First. A liberal portion of each issue to be occupied with the results of original investigations conducted by the Department or its agents.

Second. A digest of foreign labor reports.

Third. A digest of state labor reports.

Fourth. The reproduction, immediately after their passage, of new laws that affect the interests of the working people whenever such are enacted by state legislatures or Congress; also the reproduction of the decisions of courts interpreting labor laws or passing upon any subject which involves the relations of employer and employee; attention likewise will be called to any other matters pertaining to law which may be of concern and value to the industrial interests of the country and which might not be obtained without expense or trouble from other sources.

Fifth. A miscellaneous department, in which brief statements of fact or paragraphs of interest may find a place.

In conducting special investigations, the results of which are to appear in the bulletin, it may be sometimes that such results will take up the whole of the bulletin. The endeavor, however, will be to preserve the regular departments, as a rule, as just stated, departing therefrom only when the importance of the facts to be published warrants such departure.

The bulletin will not be devoted in any way to controversial matters, the enunciation of theories, nor used in any sense for propagandism. We shall undertake to present all the matters in an attractive and straightforward way, and while statistical tables will have to be employed constantly, the aim will still be to give proper space to reading matter. There are very many questions constantly coming up on

which information can not be secured except by inquiry at original sources. Such questions we hope to be able to consider whenever they arise, and to give the results a place in the bulletin.

We shall not attempt in any way to compete with the press, but in general our aim will be to furnish to the public facts and information relating to industrial affairs which can not readily be secured in any other way. So, merely ephemeral matters will not be given a place in the pages of the bulletin, but those matters which have a more or less permanent value and which will take their place in the industrial history of the country will be treated. Readers of the bulletin, therefore, will not look for accounts of passing events, unless such accounts are necessary for future use. In other words, all those matters which are dealt with fully and comprehensively by the press of the country as the days go by ought not to be and will not be used to fill up the pages of the bulletin. The field for the bulletin is wide enough without making it in any sense a newspaper.

The Department now has three channels of communication with the public. By its organic law it is authorized to make an annual report, and special reports when called upon by Congress or by the President or when considered expedient by the head of the Department, and now this more popular way of disseminating information by means of a regularly published bulletin. The annual reports will, as heretofore, consist of the results of investigations which require a large force and considerable time. They are in a sense scientific productions, and can not legitimately be brought to a popular basis in any broad sense. The special reports authorized by the organic law of the Department are those resulting from more thoroughly individual investigations, those where but one or two persons can economically work upon one subject. The annual reports are the results of inquiries made by the schedule system and where any number of people can be employed. The special reports are studies of conditions where the schedule system can not be so generally applied. The bulletin, as against the annual or the special reports, will contain such matters as can not in the nature of things find a place in the annual or special reports; but it is confidently expected that through the bulletin the Department will be able to bring much of its work closer home to the people.

The editors will take personal supervision of the preparation of the bulletin, and it will be their aim to constantly elevate its standard.

STRIKES AND LOCKOUTS IN THE UNITED STATES FROM JANUARY 1, 1881, TO JUNE 30, 1894.

The Third Annual Report of the Commissioner of Labor, entitled *Strikes and Lockouts*, furnished tables covering the details of all strikes and lockouts occurring in the United States for the six years beginning with January 1, 1881, and ending with December 31, 1886, together with summaries recapitulating the facts shown therein. The Tenth Annual Report (soon to be printed) is a volume of about 1,200 pages consisting of similar tables and summaries for the strikes and lockouts which occurred during the seven and one-half years beginning with January 1, 1887, and ending with June 30, 1894, being modeled on the lines laid down in the former report.

The two general tables relating to strikes and lockouts in the Tenth Annual Report furnish the facts in detail for each strike and lockout of one or more days' duration which occurred in the United States from January 1, 1887, to June 30, 1894. In addition to the strikes and lockouts occurring within the above period the report shows the facts for certain strikes and lockouts which occurred in the latter part of 1886, and which were omitted from the Third Annual Report because of the incompleteness at that time of the data relating to them. A comparatively small number of disturbances of less than one day's duration, 1,582 in all, have been excluded from consideration in these tables. They consist mainly of cases of misunderstanding, in which there was but a few hours' cessation of work and no financial loss or assistance involved. For this reason full information concerning them could rarely be secured, and they have not been considered sufficiently important to be classed as strikes.

In the Third Annual Report it was found necessary to make the establishment the unit in the tabular presentation, and not the strike or lockout. Generally each line there represented either a strike or a lockout in a single establishment, or a general strike or lockout in two or more establishments; but there were some instances where the facts were not so treated. In the Tenth Annual Report experience and a great amount of care have made it possible to make the strike or lockout the unit in all cases.

In order that the increase or diminution of strikes during the years embraced in the Third and Tenth Annual Reports on this subject may

be determined, the following table, showing the number of strikes in each year from January 1, 1881, to June 30, 1894, is presented:

STRIKES BY YEARS, JANUARY 1, 1881, TO JUNE 30, 1894.

Year.	Strikes.	Establishments.	Average establishments to a strike	Employees thrown out of employment.
1881.....	471	2,928	6.2	129,521
1882.....	454	2,105	4.6	154,671
1883.....	478	2,759	5.8	149,763
1884.....	443	2,367	5.3	147,054
1885.....	645	2,284	3.5	242,705
1886.....	1,432	10,053	7.0	508,044
1887.....	1,436	6,589	4.6	379,726
1888.....	906	3,506	3.9	147,704
1889.....	1,075	3,786	3.5	249,559
1890.....	1,833	9,424	5.1	351,944
1891.....	1,718	8,117	4.7	299,064
1892.....	1,298	5,540	4.3	206,671
1893.....	1,305	4,555	3.5	265,914
1894 (6 months).....	896	5,154	5.8	482,066
Total.....	14,390	69,167	4.8	3,714,406

The figures for the years from 1881 to 1886, inclusive, have been taken from the Third Annual Report. As stated in that report, the figures showing the number of strikes in each of these years are estimates, although they are believed to be approximately correct. For the period covered by the Tenth Annual Report, namely, January 1, 1887, to June 30, 1894, inclusive, the figures showing the number of strikes may be accepted as absolute. The figures showing the number of establishments and the number of employees thrown out of employment by strikes may be accepted as correct for the whole period from 1881 to 1894, inclusive. In using this table it should be borne in mind that the figures for 1894 are for the first six months of that year only, the investigation having been closed June 30, 1894.

By this table it is shown that the average number of establishments to each strike for the thirteen and one-half years was 4.8, the highest average being 7 establishments to each strike in 1886, the lowest average being 3.5 establishments to each strike in 1885, 1889, and 1893. As stated in the Third Annual Report, the strikes for 1880 were reported by Mr. Joseph D. Weeks, special agent of the Tenth Census, according to whose report the number was 610. The number of establishments involved was not reported. Commencing with 1881 the number of establishments involved was 2,928. In 1882 the number dropped to 2,105, while in 1883 it rose to 2,759, or nearly that of 1881. In 1884 and 1885 the number fell rapidly, there being 2,367 in 1884, while in 1885 the number of establishments involved in strikes was smaller than in any previous or succeeding year of the period, namely, 2,284. In 1886 the number rose to 10,053, the greatest number in any of the years considered. In 1887 it dropped to 6,589; in 1888 it dropped still further, to 3,506, and remained nearly stationary in 1889 at 3,786, while in 1890 the number again rapidly rose to 9,424, a number almost as great as that for 1886. In the next year, 1891, the number dropped to 8,117, dropping still further in 1892 and 1893, to 5,540 and 4,555,

respectively. For the first six months of 1894 the number was 5,154, indicating that if there was a proportionately large number in the last six months of that year it would reach in round numbers 10,300, a number slightly greater than that for 1886, in which the largest number of establishments were involved in strikes.

The total number of establishments involved in strikes during the whole period of thirteen and one-half years was 69,167. Of this number 4.23 per cent had strikes in 1881, 3.04 per cent had strikes in 1882, 3.99 per cent had strikes in 1883, 3.42 per cent had strikes in 1884, 3.30 per cent had strikes in 1885, 14.53 per cent had strikes in 1886, 9.53 per cent had strikes in 1887, 5.07 per cent had strikes in 1888, 5.47 per cent had strikes in 1889, 13.63 per cent had strikes in 1890, 11.74 per cent had strikes in 1891, 8.01 per cent had strikes in 1892, 6.59 per cent had strikes in 1893, and 7.45 per cent had strikes in the first half of 1894.

Of the 6,067 establishments having lockouts during the period of thirteen and one-half years 0.15 per cent were in 1881, 0.69 per cent were in 1882, 1.93 per cent were in 1883, 5.83 per cent were in 1884, 3.02 per cent were in 1885, 24.87 per cent were in 1886, 21.11 per cent were in 1887, 2.97 per cent were in 1888, 2.18 per cent were in 1889, 5.34 per cent were in 1890, 9 per cent were in 1891, 11.80 per cent were in 1892, 5.03 per cent were in 1893, and 6.08 per cent were in the first half of 1894. The percentage is highest for both strikes and lockouts in 1886. The next highest percentages occur in 1890 and 1891 for strikes, and in 1887 and 1892 for lockouts.

During the seven and one-half years included in the Tenth Annual Report Illinois shows the largest number of establishments affected, both by strikes and lockouts, there being 10,060 of the former and 1,193 of the latter. Next come New York, with 9,540 establishments involved in strikes and 723 in lockouts, and Pennsylvania with 8,219 involved in strikes and 490 in lockouts. During the six years immediately preceding those included in this report, the facts for which appeared in the Third Annual Report, the state in which the greatest number of establishments were affected by strikes was New York, with 9,247, followed by Illinois, with 2,768, and Pennsylvania, with 2,442. The greatest number affected by lockouts was 1,528, found in New York, followed by 147 in Massachusetts and 130 in Pennsylvania, the number in Illinois being 127. Combining the facts for both these periods, in order to secure a statement for the thirteen and one-half years included in both of the reports of the Department on strikes and lockouts, we find the greatest number of establishments affected by strikes to have been in New York, 18,787, followed by Illinois, with 12,828, and Pennsylvania, with 10,661. The states appear in the same order in lockouts, the number of establishments affected being 2,251 in New York, 1,320 in Illinois, and 620 in Pennsylvania.

The industries most affected by strikes during the seven and one-half years included in the Tenth Annual Report, were the building

trades, with 20,785 establishments involved; coal and coke, with 5,958; clothing, with 3,041; tobacco, with 2,506; food preparations, with 2,398; stone quarrying and cutting, with 1,993; metals and metallic goods, with 1,834; transportation, with 1,327; printing and publishing, with 608; boots and shoes, with 607; furniture, with 459; wooden goods, with 409, and brick, with 406 establishments. The industries most affected by lockouts were the building trades, with 1,900; stone quarrying and cutting, with 489; clothing, with 431; brewing, with 150; boots and shoes, with 130; metals and metallic goods, with 128, and transportation with 112 establishments involved. For the immediately preceding period of six years, 1881 to 1886, included in the Third Annual Report, the greatest frequency of strikes was found in the building trades, with 6,075 establishments affected; tobacco, with 2,959; mining (practically the same as coal and coke in the Tenth Annual Report), with 2,060; clothing, with 1,728; metals and metallic goods, with 1,570; transportation, with 1,478; food preparations, with 1,419; furniture, with 491; cooperage, with 484; brick, with 478; stone quarrying and cutting, with 468; lumber, with 395; boots and shoes, with 352; wooden goods, with 240, and printing and publishing, with 223 establishments. The lockouts for that period involved 773 establishments in the clothing industry, 531 in the building trades, 226 in the tobacco industry, 155 in boots and shoes, 76 in metals and metallic goods, etc.

A combination of the facts for strikes for the two periods, selecting the 13 industries most largely affected, shows that out of 69,167 establishments involved in strikes during the period from January 1, 1881, to June 30, 1894, 62,038, or 89.69 per cent, were in the following 13 industries: Building trades, 26,860 establishments; coal and coke, 8,018; tobacco, 5,465; clothing, 4,769; food preparations, 3,817; metals and metallic goods, 3,454; transportation, 2,805; stone quarrying and cutting, 2,461; boots and shoes, 959; furniture, 950; brick, 884; printing and publishing, 831, and cooperage, 765.

In the lockouts which occurred during the thirteen and one-half years, six industries bore a very large proportion of the burden, involving 4,914 establishments, or 81 per cent, out of a total of 6,067 establishments. The industries and number of establishments involved in each are as follows: Building trades, 2,431; clothing, 1,204; stone quarrying and cutting, 513; boots and shoes, 285; tobacco, 277, and metals and metallic goods, 204.

The total number of employees involved or thrown out of employment in the whole number of strikes from 1881 to 1886, inclusive, as shown by the Third Annual Report, was 1,323,203. The number as shown by the Tenth Annual Report, for the period from January 1, 1887, to June 30, 1894, was 2,391,203. Adding these numbers together, it is seen that 3,714,406 persons were thrown out of employment by reason of strikes during the period of thirteen and one-half years from January 1, 1881, to June 30, 1894. The number of strikers during the first six years of this period was shown to have been 1,020,156; during the latter

seven and one-half years it was 1,834,218. The number of strikers during the whole period of thirteen and one-half years was therefore 2,854,374. From 1881 to 1886 there were 103,038 new employees engaged after the strikes, of which 37,483 were brought from other places than those in which the strikes occurred. The per cent of new employees after strike of the total number of employees before strike—1,660,835—was therefore 6.20. The per cent of the employees brought from other places of the number of new employees after strike was 36.38.

For the succeeding seven and one-half years, the period involved in the Tenth Annual Report, there were 239,431 new employees after the strikes, of which 115,377 were brought from other places. For this period the per cent of new employees after strike of the total number of employees before strike, 4,300,410, was 5.57, and the per cent of employees brought from other places of the number of new employees after strike, 48.19. Combining the facts for both periods, it is seen that there were, during the thirteen and one-half years, 342,469 new employees engaged after the strikes, and that 152,860 of that number were brought from other places. The new employees after the strikes were 5.74 per cent of the total number of employees before the strikes, 5,961,245, while 44.63 per cent of the new employees after the strikes were brought from other places than those in which the strikes occurred.

In the Third Annual Report it was shown that during the period from 1881 to 1886, inclusive, 2,214 establishments were involved in lockouts, there being 175,270 employees in the establishments before the lockouts occurred, while the number actually involved or locked out was 160,823. There were 13,976 new employees secured at the close of lockouts, 5,682 being brought from other places than those in which the lockouts occurred. For the period of seven and one-half years involved in the Tenth Annual Report lockouts were ordered in 3,853 establishments, having 274,657 employees before the lockouts, of which 205,867 were thrown out of employment in consequence thereof. These establishments secured 27,465 new employees after the lockouts, 16,300 of whom were brought from other places. Combining these facts as to lockouts for the two periods involved, it is seen that during the thirteen and one-half years from January 1, 1881, to June 30, 1894, lockouts occurred in 6,067 establishments in which 449,927 employees were engaged. Of this number 366,690, or 81.50 per cent, were thrown out of employment by the lockouts. In these establishments there were 41,441 new employees engaged after the lockouts, of whom 21,982 were brought from other places than those in which the lockouts occurred. The per cent of new employees after the lockouts of the total number of employees before lockouts was, therefore, 9.21, and of employees brought from other places of the number of new employees after lockouts 53.04.

It should be remembered in considering the figures relating to the number of establishments, the number of employees, etc., that they do not represent the actual number of different individual establish-

ments or different individual employees who were involved in strikes or lockouts in a given industry or in a given year, because in many cases there have been two or more strikes or lockouts in the same establishments in the same year, and in such cases the establishment and the number of employees are duplicated or triplicated, as the case may be, in the totals derived by addition. In the figures showing the number of "employees for whom strike was undertaken" in the tables for strikes there is even more duplication of the kind mentioned. For instance, a sympathetic strike may occur in which the employees strike to enforce the demands of certain employees in another establishment. The number of employees for whom the strike was undertaken, would in that case be the number for whom it was undertaken in that other establishment. The same employees would, therefore, appear in that column in two places in the primary tables, first in connection with the establishment in which they were employed, and second in the establishment in which the sympathetic strike occurred, thus unavoidably being duplicated in tables derived by addition.

As previously stated, a small number of strikes occurring in 1886, 21 in all, which were unavoidably omitted from the Third Annual Report, have been tabulated in the later one. Wherever the facts shown by the two reports are given by years this number and the various facts relating thereto have been added to the figures for 1886 as shown by the Third Annual Report. In the statements previously made, by states and by industries, they have not been so added, but appear in the totals for the period involved in the later report. The number is so small as to make no appreciable difference when comparing the two reports, and to have eliminated them in the later and added them to the Third Annual Report would have involved the reader in many difficulties.

The following table, classifying the employees involved in strikes and lockouts as to sex, combines the facts shown in the Third Annual Report with those shown in the Tenth Annual Report:

SEX OF EMPLOYEES THROWN OUT OF EMPLOYMENT, JANUARY 1, 1881, TO
JUNE 30, 1894.

Year.	Strikes.			Lockouts.		
	Employees thrown out of employment.	Males (per cent).	Females (per cent).	Employees thrown out of employment.	Males (per cent).	Females (per cent).
1881.....	129,521	94.08	5.92	655	83.21	16.79
1882.....	154,671	92.15	7.85	4,131	93.80	6.20
1883.....	149,763	87.66	12.34	20,512	73.58	26.42
1884.....	147,054	88.78	11.22	18,121	78.93	21.07
1885.....	242,705	87.77	12.23	15,424	83.77	16.23
1886.....	508,044	86.17	13.83	101,980	63.02	36.98
1887.....	379,726	91.77	8.23	59,630	94.76	5.24
1888.....	147,704	91.50	8.50	15,176	79.53	20.47
1889.....	249,559	90.48	9.52	10,731	73.91	26.09
1890.....	351,944	90.53	9.47	21,555	72.49	27.51
1891.....	299,064	94.90	5.10	31,014	59.13	40.87
1892.....	206,671	93.57	6.43	32,014	96.02	3.98
1893.....	265,914	93.06	6.94	21,842	84.95	15.05
1894 (6 months).....	482,066	95.13	4.87	13,905	95.83	4.17
Total	3,714,406	91.22	8.78	366,690	77.47	22.53

An examination of the Tenth Annual Report shows that during the seven and one-half years included in it, 69.39 per cent of all the establishments affected by strikes and 75.91 per cent of all affected by lockouts were located in the five states of Illinois, Massachusetts, New York, Ohio, and Pennsylvania. During the six years immediately preceding the above period, it is shown in the Third Annual Report that 74.84 per cent of all establishments in the country, so far as strikes were concerned, and 89.48 per cent of all the establishments in the country, so far as lockouts were concerned, were found in the same states. The following table, combining these facts for the entire period of thirteen and one-half years included in the Third and Tenth Annual Reports, shows the percentages for each year for the five states named:

ESTABLISHMENTS INVOLVED IN ILLINOIS, MASSACHUSETTS, NEW YORK, OHIO, AND PENNSYLVANIA, JANUARY 1, 1881, TO JUNE 30, 1894.

Year.	Strikes.			Lockouts.		
	Total establishments in the United States.	Establishments in the five selected states.	Per cent of establishments in the five selected states.	Total establishments in the United States.	Establishments in the five selected states.	Per cent of establishments in the five selected states.
1881.....	2,928	2,154	73.57	9	4	44.44
1882.....	2,105	1,499	71.21	42	23	54.76
1883.....	2,759	2,046	74.16	117	105	89.74
1884.....	2,367	1,896	80.10	354	306	86.44
1885.....	2,284	1,586	69.44	183	140	76.50
1886.....	10,053	7,675	76.35	1,509	1,403	92.98
1887.....	6,589	4,761	72.26	1,281	1,188	92.74
1888.....	3,506	2,404	68.57	180	114	63.33
1889.....	3,786	2,275	60.09	132	65	49.24
1890.....	9,424	6,990	74.17	324	203	62.65
1891.....	8,117	5,776	71.16	546	339	62.09
1892.....	5,540	3,200	57.76	716	522	72.91
1893.....	4,555	3,186	69.95	305	190	62.30
1894 (6 months) ..	5,154	3,762	72.99	369	304	82.38
Total	69,167	49,210	71.15	6,067	4,906	80.86

These five states contained 51 per cent of all the manufacturing establishments, and employed 56 per cent of the capital invested in the mechanical industries of the United States, taking the census of 1890 as the basis of computation.

The distribution of strikes and lockouts, by cities, during the seven and one-half years from January 1, 1887, to June 30, 1894, is shown in the following tables:

SUMMARY OF STRIKES IN THE PRINCIPAL CITIES, JANUARY 1, 1887, TO JUNE 30, 1894.

[In the case of many general strikes extending through different cities it was found impossible to subdivide the facts and credit them to the several cities involved. In such cases the whole strike has generally been tabulated against the city most largely affected.]

City.	Total strikes.	Establishments.	Employees thrown out of employment.	Wage loss of employees.	Assistance to employees by labor organizations.	Loss of employers.
New York, N. Y.....	2,614	6,467	215,649	\$6,449,385	\$792,817	\$3,545,766
Brooklyn, N. Y.....	671	1,271	31,768	914,045	145,848	532,780
Chicago, Ill.....	528	8,325	282,611	8,846,494	1,886,788	14,444,034
Boston, Mass.....	257	911	25,574	800,882	173,564	589,982
Allegheny and Pittsburg, Pa.	251	4,142	100,822	7,379,765	722,706	2,599,487
Philadelphia, Pa.....	240	1,132	59,527	2,002,219	194,277	836,568
Saint Louis, Mo.....	111	1,064	19,693	848,357	96,506	572,933
Cincinnati, Ohio.....	109	580	17,577	736,306	72,886	572,272
Milwaukee, Wis.....	100	1,237	20,778	1,265,049	112,862	799,700
Lynn, Mass.....	100	110	4,027	147,028	9,871	86,488
Fall River, Mass.....	95	156	30,232	500,264	22,429	118,319
San Francisco, Cal.....	92	337	7,254	480,387	96,854	415,625
Baltimore, Md.....	92	280	11,192	424,149	18,604	187,552
New Haven, Conn.....	82	205	5,287	206,340	35,588	40,568
Newark, N. J.....	69	324	11,538	500,896	58,734	154,460
Cleveland, Ohio.....	64	314	11,322	208,738	26,324	117,207
Rochester, N. Y.....	56	237	9,314	478,702	11,781	300,621
Indianapolis, Ind.....	51	309	7,851	116,429	10,353	161,102
Haverhill, Mass.....	51	76	5,271	97,239	6,660	78,495
Minneapolis, Minn.....	50	169	7,615	167,524	18,399	189,400
Paterson, N. J.....	47	117	22,326	1,019,768	26,757	555,200
Buffalo, N. Y.....	46	408	14,079	459,758	19,950	818,015
Jersey City, N. J.....	46	113	7,819	90,020	1,330	12,275
Saint Paul, Minn.....	45	255	22,475	780,325	24,520	1,017,795
Troy, N. Y.....	42	123	3,649	68,031	3,769	39,802
Total.....	5,909	28,662	955,250	34,988,100	4,590,177	28,786,446

SUMMARY OF LOCKOUTS IN THE PRINCIPAL CITIES, JANUARY 1, 1887, TO JUNE 30, 1894.

[In the case of many general lockouts extending through different cities it was found impossible to subdivide the facts and credit them to the several cities involved. In such cases the whole lockout has generally been tabulated against the city most largely affected.]

City.	Total lockouts.	Establishments.	Employees thrown out of employment.	Wage loss of employees.	Assistance to employees by labor organizations.	Loss of employers.
New York, N. Y.....	43	393	19,959	\$587,801	\$83,112	\$370,442
Boston, Mass.....	19	128	3,072	212,434	40,450	97,111
Chicago, Ill.....	18	1,151	48,612	3,576,817	70,050	2,789,910
Allegheny and Pittsburg, Pa.	15	385	11,572	5,353,764	250,025	727,959
Philadelphia, Pa.....	14	82	9,262	447,958	62,585	510,575
Cincinnati, Ohio.....	13	96	3,908	211,375	27,508	60,339
San Francisco, Cal.....	12	42	776	67,763	13,170	18,200
Haverhill, Mass.....	10	57	7,436	101,606	5,900	60,400
Saint Paul, Minn.....	10	55	1,056	30,780	8,303	46,150
Brooklyn, N. Y.....	9	64	2,360	68,424	6,092	121,225
Saint Louis, Mo.....	8	42	1,006	217,247	45,249	48,140
Milwaukee, Wis.....	7	25	752	245,755	12,375	505,600
Minneapolis, Minn.....	7	7	1,650	28,250	2,828	26,100
Indianapolis, Ind.....	6	116	1,135	65,224	900	20,000
Rochester, N. Y.....	6	81	18,271	462,260	3,159	205,545
Richmond, Va.....	6	15	117	10,503	2,274	650
Buffalo, N. Y.....	5	30	930	72,438	365	13,670
Seattle, Wash.....	5	23	423	19,600	2,628	4,040
Detroit, Mich.....	5	11	1,264	56,201	14,642	5,500
Springfield, Mass.....	5	8	208	1,230	.....	11,755
New Haven, Conn.....	5	8	64	3,344	840	15,725
Baltimore, Md.....	5	6	239	7,240	2,684	7,950
Newark, N. J.....	4	49	2,974	139,536	12,350	29,700
Woburn, Mass.....	4	19	1,577	78,646	4,329	45,600
Albany, N. Y.....	3	77	1,512	42,267	.....	12,000
Total.....	244	2,970	140,135	12,108,463	671,818	5,754,286

In the case of both strikes and lockouts the cities shown are the 26 in which the greatest number of these disturbances occurred during the period included in the report. It will be noticed that the cities are

practically the same in both classes of disturbances, only 6 cities in each table being different.

Considering the table for strikes, it is seen that out of a total of 10,488 strikes for the entire country, 5,909, or 56.34 per cent, occurred in the 26 cities included in that table. The number of establishments involved in strikes in the United States during the period was shown as 46,863, of which number 28,662, or 61.16 per cent, occurred in the 26 cities. The wage loss to employees through strikes in the 26 cities was \$34,988,100 as against \$111,993,143 for the entire country, and the loss to employers \$28,786,446 as against \$51,888,833. These 26 cities contained 34.26 per cent of all the manufacturing establishments, and employed 38.88 per cent of the capital invested in the mechanical industries of the United States, taking the census of 1890 as the basis of computation. Seven of the 26 cities, New York, Brooklyn, Chicago, Boston, Allegheny, Pittsburg, and Philadelphia, reported 4,561 strikes, or 43.49 per cent, of all the strikes which occurred in the United States during the period involved, and 22,248 establishments, or 47.47 per cent, of the whole number of establishments involved.

Of the 22,304 establishments involved in strikes during the six years covered by the Third Annual Report (1881 to 1886), as was there shown, the strikes in 18,342, or 82.24 per cent of the whole, were ordered by labor organizations, while of the 2,214 establishments in which lockouts occurred 1,753, or 79.18 per cent, were ordered by combinations of employers. The facts for the seven and one-half years included in the Tenth Annual Report (January 1, 1887, to June 30, 1894) are as follows: Excluding from consideration seven strikes for which no report touching this point could be secured, 7,295, or 69.60 per cent of the whole number of strikes (10,481), were ordered by labor organizations, while of the 442 lockouts occurring during this period but 81, or 18.33 per cent, were ordered by an employers' organization. It will be noticed, in the preceding statement, that for the former period the establishment forms the basis of the percentages, while for the latter the strike or lockout forms the basis. This is unavoidable, owing to the difference in the tabulation of the facts for this point in the two reports. It does not, however, materially affect the comparableness of the percentages. Bearing this in mind, the facts for each year in this respect may be clearly seen in the percentage table which follows:

STRIKES AND LOCKOUTS ORDERED BY ORGANIZATIONS, JANUARY 1, 1881, TO JUNE 30, 1894.

Year.	Strikes (per cent).	Lockouts (per cent).	Year.	Strikes (per cent).	Lockouts (per cent).
1881	75.58	22.22	1888	68.14	20.00
1882	76.01	26.19	1889	67.35	11.11
1883	83.98	41.03	1890	71.33	14.06
1884	82.85	79.10	1891	74.84	13.04
1885	70.93	71.58	1892	70.72	22.95
1886	87.53	84.89	1893	69.43	21.43
1887	66.34	25.37	1894 (6 months).....	63.80	14.29

Combining the facts for the period involved in the Third Annual Report with those for the period included in the later report, the following table shows by years, in the form of percentages, the proportion of the establishments involved in both strikes and lockouts which were closed in consequence of such disturbance:

ESTABLISHMENTS CLOSED, JANUARY 1, 1881, TO JUNE 30, 1894.

Year.	Strikes (per cent).	Lockouts (per cent).	Year.	Strikes (per cent).	Lockouts (per cent).
1881	55.81	33.33	1889	61.89	59.09
1882	54.01	59.52	1890	56.25	63.89
1883	63.57	58.12	1891	56.66	65.93
1884	64.72	37.85	1892	65.60	66.90
1885	71.58	79.23	1893	65.64	40.98
1886	58.24	67.93	1894 (6 months).....	60.50	14.91
1887	57.55	83.84			
1888	53.45	55.00	Average	59.56	63.90

Referring to the Third Annual Report, it is seen that from 1881 to 1886, inclusive, of the 22,304 establishments subjected to strikes, 13,411, or 60.13 per cent, were temporarily closed, and of the 2,214 establishments in which lockouts occurred, 1,400, or 63.23 per cent, were closed. The duration of stoppage, or the average days closed, for strikes was 23 days and for lockouts 28.4 days. The facts as shown in the Tenth Annual Report for the seven and one-half years from January 1, 1887, to June 30, 1894, are that of 46,863 establishments subjected to strikes 27,787, or 59.29 per cent, were closed, 42 being closed permanently or having strikes still pending June 30, 1894, the remainder being only temporarily closed; while of the 3,853 establishments involved in lockouts 2,477, or 64.29 per cent, were closed, 23 being closed permanently or having lockouts still pending June 30, 1894, the remainder being only temporarily closed. The average days closed on account of strikes, excluding the 42 above mentioned, was 22.3 days, and on account of lockouts, excluding the 23 above mentioned, 35.4 days.

Combining the facts for the two periods, as shown by the preceding figures, it is seen that during the thirteen and one-half years from January 1, 1881, to June 30, 1894, out of a total of 69,167 establishments in which strikes occurred, 41,198, or 59.56 per cent, were closed, while of the 6,067 establishments subjected to lockouts, 3,877, or 63.90 per cent, were closed. The duration of stoppage, or days closed, in the 41,156 establishments which were temporarily closed, was 22.5 days, while in the 3,854 establishments temporarily closed by reason of lockouts the average time closed was 32.8 days.

The duration of strikes or lockouts themselves—that is, the average length of time which elapsed before the establishments resumed operations and were running normally, either by reason of the strikers or employees locked out having returned to work or by their places having been filled by others—applies to all establishments, whether closed or not, and differs of course from the figures given for duration of entire stoppage of work, which applies only to establishments entirely

closed. The following table shows the average duration or days to date when strikers or employees locked out were reemployed or their places filled by others for each of the years included in the Third and Tenth Annual Reports. A small number of establishments which were closed permanently in consequence of strikes or lockouts, or in which strikes or lockouts were still pending, have of course been omitted in computing the averages:

DURATION OF STRIKES AND LOCKOUTS, JANUARY 1, 1881, TO JUNE 30, 1894.

[The duration involves the number of days from date of strike or lockout to date when employees returned to work or when their places were filled by others.]

Year.	Strikes.		Lockouts.		Year.	Strikes.		Lockouts.	
	Estab-lish-ments.	Aver-age dura-tion (days).	Estab-lish-ments.	Aver-age dura-tion (days).		Estab-lish-ments.	Aver-age dura-tion (days).	Estab-lish-ments.	Aver-age dura-tion (days).
1881	2,928	12.8	9	32.2	1889	3,786	26.3	132	57.5
1882	2,105	21.9	42	105.0	1890	9,424	24.2	324	73.9
1883	2,759	20.6	117	57.5	1891	8,117	34.9	546	37.8
1884	2,367	30.5	354	41.4	1892	5,540	23.4	716	72.0
1885	2,284	30.1	183	27.1	1893	4,555	20.6	305	34.7
1886	10,053	23.4	1,509	39.1	1894 (6 months) ..	5,154	37.8	369	18.7
1887	6,589	20.9	1,281	49.8	Total.....	69,167	25.4	6,067	47.6
1888	3,506	20.3	180	74.9					

According to the Third Annual Report, for the years 1881 to 1886, of the firms against whom strikes were instituted 46.52 per cent granted the demands of their employees; in 13.47 per cent of the establishments partial success in attaining the objects for which the strikes were instituted was gained, while failure followed in 39.95 per cent of the establishments; a small number of establishments, constituting 0.06 per cent of the whole number, had strikes still pending December 31, 1886. In the lockouts during those years the firms gained their point in 25.47 per cent of the establishments; in 8.58 per cent they partially succeeded and in 60.48 per cent failed; in 5.47 per cent of the whole number of establishments involved the lockouts were still pending December 31, 1886.

For the period included in the Tenth Annual Report, out of the whole number of establishments affected by strikes, viz, 46,863, success in their demands was gained by the employees in 20,397 establishments, or 43.52 per cent; partial success was gained in 4,775 establishments, or 10.19 per cent; and failure followed in 21,687 establishments, or 46.28 per cent of the whole number; for 4 establishments, or 0.01 per cent, either the results were not reported or the strikes were still pending June 30, 1894. Out of the 3,853 establishments having lockouts, 1,883, or 48.87 per cent of the whole number, succeeded in gaining their demands; 391, or 10.15 per cent, partially succeeded, and 1,558, or 40.44 per cent, failed; in 21 establishments, or 0.54 per cent of the whole number, the lockouts were still pending June 30, 1894. The percent-

ages for each of the years included in the two reports are shown as follows:

RESULTS FOR ESTABLISHMENTS, JANUARY 1, 1881, TO JUNE 30, 1894.

Year.	Per cent of establishments in strikes which—			Per cent of establishments in lockouts which—		
	Succeeded.	Succeeded partly.	Failed.	Succeeded.	Succeeded partly.	Failed.
1881.....	61.37	7.00	31.63	88.89	11.11	-----
1882.....	53.59	8.17	38.24	64.29	-----	35.71
1883.....	58.17	16.09	25.74	56.41	-----	43.59
1884.....	51.50	3.89	44.61	27.97	.28	71.75
1885.....	52.80	9.50	37.70	38.25	3.28	58.47
1886.....	<i>a</i> 34.45	<i>a</i> 18.82	<i>a</i> 46.58	<i>b</i> 19.48	<i>b</i> 12.06	<i>b</i> 60.44
1887.....	45.64	7.19	47.17	34.19	1.25	64.56
1888.....	52.22	5.48	42.30	74.44	3.89	21.67
1889.....	46.49	18.91	34.60	40.91	25.76	33.33
1890.....	<i>c</i> 52.64	<i>c</i> 10.01	<i>c</i> 37.34	65.74	5.56	28.70
1891.....	37.87	8.29	53.84	63.92	14.29	21.79
1892.....	39.31	8.70	51.99	69.13	25.28	5.59
1893.....	<i>d</i> 50.82	<i>d</i> 10.32	<i>d</i> 38.79	<i>e</i> 39.02	<i>e</i> 17.05	<i>e</i> 37.05
1894 (6 months)	23.83	15.66	60.51	21.95	1.36	76.69
Total	<i>f</i> 44.49	<i>f</i> 11.25	<i>f</i> 44.23	<i>g</i> 40.33	<i>g</i> 9.58	<i>g</i> 47.75

a Not including 15 establishments in which strikes were still pending December 31, 1886.

b Not including 121 establishments in which lockouts were still pending December 31, 1886.

c Not including 1 establishment not reporting.

d Not including 3 establishments in which strikes were still pending June 30, 1894.

e Not including 21 establishments in which lockouts were still pending June 30, 1894.

f Not including 19 establishments for the reasons stated in notes *a*, *c*, and *d*.

g Not including 142 establishments for the reasons stated in notes *b* and *e*.

For the thirteen and one-half years ending June 30, 1894, as shown by this table, out of a total of 69,167 establishments affected by strikes the employees were successful in gaining their demands in 30,772, or 44.49 per cent, and partly successful in 7,779, or 11.25 per cent, while in 30,597 establishments, or 44.23 per cent, they failed; in a very small number of establishments, constituting 0.03 per cent of all the establishments involved, the results of strikes were not obtainable. Of the 6,067 establishments in which lockouts occurred during the same period, the firms gained their point in 2,447 establishments, or 40.33 per cent of the whole number involved; in 581, or 9.58 per cent, they were partly successful, while in 2,897, or 47.75 per cent, they failed; in the remaining 142, or 2.34 per cent of the establishments, the results of the lockouts were not obtainable.

The results of strikes from 1881 to 1886, so far as they concerned employees, as shown in the Third Annual Report, were as follows: The number of persons thrown out of employment, in the 10,375 establishments having successful strikes, was 518,583; in the 3,004 establishments in which strikes were partly successful 143,976 employees were involved, while in the 8,910 establishments in which the strikes were failures 660,396 persons were thrown out of employment. The results of strikes in 15 establishments, involving 248 persons, were not reported. While the establishments in which strikes succeeded constituted 46.52 per cent of the establishments in which strikes occurred, the number of persons thrown out of employment in the successful

strikes constituted but 39.19 per cent of the whole number of persons involved; the number of establishments involved in partly successful strikes was 13.47 per cent of all establishments, while the number of persons involved in such strikes was only 10.88 per cent of the whole number of persons. The number of establishments in which strikes failed constituted 39.95 per cent of the whole number, while 49.91 per cent of the number of persons thrown out of employment were involved in such strikes. The number of establishments in which the results of strikes were not reported constituted 0.06 per cent of the entire number, the number of persons thrown out of employment in such establishments being 0.02 per cent of the entire number of persons thrown out of employment.

The results for the succeeding seven and one-half years, from January 1, 1887, to June 30, 1894, so far as they concerned employees, as shown in the Tenth Annual Report, are as follows: In the 20,397 establishments having successful strikes 669,992 persons were thrown out of employment; in the 4,775 establishments in which strikes were partly successful 318,801 employees were involved, while in the 21,687 establishments in which strikes failed, 1,400,988 persons were thrown out of employment. The results were not reported in 19 establishments in which 1,422 persons were involved. While the establishments in which strikes succeeded constituted 43.52 per cent of the establishments in which strikes occurred, the number of persons thrown out of employment in the successful strikes constituted 28.02 per cent of the whole number of persons involved; the number of establishments involved in partly successful strikes was 10.19 per cent of all establishments, while the number of persons involved in such strikes was 13.33 per cent of the whole number. The number of establishments in which strikes failed was 46.28 per cent of the whole number, while 58.59 per cent of the whole number of persons thrown out of employment were involved in such strikes. In 0.01 per cent of the entire number of establishments, including 0.06 per cent of the number of persons thrown out of employment, the results of strikes were not reported.

The following table combines the facts for the two reports, showing the results, so far as employees are concerned, for the strikes during an uninterrupted period of thirteen and one-half years, beginning January 1, 1881, and ending June 30, 1894:

RESULTS OF STRIKES FOR EMPLOYEES, JANUARY 1, 1881, TO JUNE 30, 1894.

Year.	Number thrown out of employment.				Per cent thrown out of employment.		
	In successful strikes.	In partly successful strikes.	In strikes which failed.	In total strikes.	In successful strikes.	In partly successful strikes.	In strikes which failed.
1881	55,600	17,482	56,439	129,521	42.93	13.50	43.57
1882	45,746	7,112	101,813	154,671	29.58	4.60	65.82
1883	55,140	17,024	77,599	149,763	36.82	11.37	51.81
1884	52,736	5,044	89,274	147,054	35.86	3.43	60.71
1885	115,375	23,855	103,475	242,705	47.54	9.83	42.63
1886	<i>a</i> 195,400	<i>a</i> 74,167	<i>a</i> 238,229	508,044	<i>a</i> 38.46	<i>a</i> 14.60	<i>a</i> 46.90
1887	127,629	26,442	225,655	379,726	33.61	6.96	59.43
1888	41,106	11,130	95,468	147,704	27.83	7.54	64.63
1889	72,099	62,607	114,853	249,559	28.89	25.09	46.02
1890	<i>b</i> 158,787	<i>b</i> 48,444	<i>b</i> 144,681	351,944	<i>b</i> 45.12	<i>b</i> 13.76	<i>b</i> 41.11
1891	80,766	22,885	195,413	299,064	27.01	7.65	65.34
1892	61,125	16,429	129,117	206,671	29.58	7.95	62.47
1893	<i>c</i> 62,018	<i>c</i> 41,765	<i>c</i> 160,741	265,914	<i>c</i> 23.32	<i>c</i> 15.71	<i>c</i> 60.45
1894 (6 months)	65,048	88,391	328,627	482,066	13.49	18.34	68.17
Total	<i>d</i> 1,188,575	<i>d</i> 462,777	<i>d</i> 2,061,384	3,714,406	<i>d</i> 32.00	<i>d</i> 12.46	<i>d</i> 55.50

a Not including 248 engaged in strikes still pending December 31, 1886.

b Not including 32 engaged in strikes not reporting result.

c Not including 1,390 engaged in strikes still pending June 30, 1894.

d Not including 1,670 for the reasons stated in the preceding notes.

The totals as given in this table show that the number of persons thrown out of employment in the 30,772 establishments having successful strikes was 1,188,575. In the 7,779 establishments in which partial success was gained 462,777 employees were involved, while in the 30,597 establishments in which strikes failed 2,061,384 persons were thrown out of employment. The last three columns of the table show for each year, and for the thirteen and one-half years, the per cent of employees in establishments in which the strikes succeeded, partly succeeded, or failed. Taking the total for the period of thirteen and one-half years, it is seen that 32 per cent of the whole number of persons thrown out of employment succeeded in gaining the object for which they struck; 12.46 per cent succeeded partly, while 55.50 per cent, or over half of the whole number, failed entirely in gaining their demands. A small proportion of the whole number, 0.04 per cent, for the various reasons stated in the notes to the table, made no report as to the result.

The Third Annual Report shows that for the years included therein (1881 to 1886) seventeen of the causes for which strikes were undertaken included 90.28 per cent of all the establishments, leaving the remaining 297 causes operative in only 9.72 per cent of establishments in which strikes occurred. Even four leading causes were found to cover 77.16 per cent of the establishments. The following table was there given as clearly bringing out these facts:

LEADING CAUSES OF STRIKES, JANUARY 1, 1881, TO DECEMBER 31, 1886.

Cause or object.	Establishments.	Per cent.
For increase of wages.....	9,439	42.32
For reduction of hours.....	4,344	19.48
Against reduction of wages.....	1,734	7.77
For increase of wages and reduction of hours.....	1,692	7.59
For reduction of hours and against being compelled to board with employer.....	800	3.59
For change of hour of beginning work.....	360	1.61
For increase of wages and against the contract system.....	238	1.07
For increase of wages and against employment of nonunion men.....	215	.96
In sympathy with strike elsewhere.....	173	.77
For 9 hours' work with 10 hours' pay.....	172	.77
Against employment of nonunion men, foremen, etc.....	162	.73
For increase of wages and recognition of union.....	145	.65
For adoption of union, etc., scale of prices.....	142	.64
Against increase of hours.....	138	.62
For increase of wages and enforcement of union indenture rules.....	132	.59
For reduction of hours and wages.....	126	.56
For reinstatement of discharged employees, foremen, etc.....	124	.56
Total of 17 leading causes.....	20,136	90.28
All other causes (297).....	2,168	9.72
Total for the United States.....	22,304	100.00

An examination of the causes for which strikes were undertaken during the period of seven and one-half years included in the Tenth Annual Report, shows that the seventeen principal causes included 81.23 per cent of all the establishments, leaving the remaining 574 causes active in only 18.77 per cent of the establishments subjected to strikes during the period. Five of the leading causes included a very large proportion of all establishments, the per cent being 61.42 of the whole number involved. The following table, showing the number and per cent of establishments falling under each of the seventeen principal causes, during the period of seven and one-half years involved in this report, brings out these percentages in detail:

LEADING CAUSES OF STRIKES, JANUARY 1, 1887, TO JUNE 30, 1894.

Cause or object.	Establishments.	Per cent.
For increase of wages.....	12,041	25.69
For reduction of hours.....	6,199	13.23
Against reduction of wages.....	3,830	8.17
In sympathy with strike elsewhere.....	3,620	7.73
For increase of wages and reduction of hours.....	3,095	6.60
Against employment of nonunion men.....	1,688	3.60
For adoption of new scale.....	1,559	3.33
For recognition of union.....	1,314	2.80
For adoption of union scale.....	844	1.80
For adoption of union rules and union scale.....	783	1.67
For increase of wages and recognition of union.....	686	1.46
To compel World's Fair directors to employ none but union men in building trades.....	472	1.01
For reinstatement of discharged employees.....	468	1.00
For payment of wages overdue.....	383	.82
For increase of wages, and reduction of hours on Saturday.....	378	.81
Against being compelled to board with employer, and for reduction of hours and recognition of union.....	366	.78
For fortnightly payment.....	342	.73
Total of 17 leading causes.....	38,068	81.23
All other causes (574).....	8,795	18.77
Total for the United States.....	46,863	100.00

One of the most important features of the tabulation is the statement of the losses of the employees and of the employers by reason of strikes and lockouts. These figures were collected with the greatest possible care, and although in many cases only an estimate could be secured the results as given are believed to be a very close approximation to the exact losses. It is natural to suppose that after the lapse of several years exact figures could not be secured concerning facts of which no record is kept in most instances. The figures here given are for the immediate, and in many instances only temporary, losses of employees and employers. In most businesses there are seasons of entire or partial idleness among its employees, owing to sickness, voluntary lay-offs, running slack time, etc., the working days per year being on an average from 200 to 250 days out of a possible 313. When a strike or lockout occurs in an establishment whose business is of such a character it is often followed by a period of unusual activity, in which the employee and employer both make up the time lost by reason of the temporary cessation of business on account of the strike.

The employer may in some instances be subjected to an ultimate loss by reason of his inability to fill contracts already made, but it may be accepted as a fact that much of the loss in the cases of both employer and employee is only temporary. It was found impossible, however, for the agents of the Department to take these facts into consideration, inasmuch as in many instances a period of six months or even a year must have elapsed before the whole or even a part of such loss was made up. The computation of wage loss has, therefore, been based on the number of employees thrown out of employment, their average wages, and the number of working days which elapsed before they were reemployed or secured work elsewhere. The amounts representing employers' losses are the figures (in most cases, estimates) furnished by the firms themselves, the Department's agents being instructed to consider, as well as they could, their probable correctness. In the summaries by years the figures can not represent absolute accuracy for a given year, because many strikes beginning in one year ended in another; the entire loss and assistance, as well as the other facts included in the tabulation, have been placed in the year in which the strike or lockout began. These differences may, however, counterbalance each other, and the reported results thus be nearly accurate.

Bearing in mind, then, the difficulties in ascertaining the exact losses of employees and employers as a result of strikes and lockouts, reference may be had to the following table showing the amount of loss to employees and to employers and the amount of assistance granted employees by their labor organizations for a period of thirteen and one-half years from January 1, 1881, to June 30, 1894.

WAGE LOSS OF EMPLOYEES, ASSISTANCE TO EMPLOYEES, AND LOSS OF EMPLOYERS,
JANUARY 1, 1881, TO JUNE 30, 1894.

Year.	Strikes.			Lockouts.		
	To date when strikers were reemployed or employed elsewhere.		Loss of employers.	To date when employees locked out were reemployed or employed elsewhere.		Loss of employers.
	Wage loss of employees.	Assistance to employees by labor organizations.		Wage loss of employees.	Assistance to employees by labor organizations.	
1881.....	\$3,372,578	\$287,999	\$1,919,483	\$18,519	\$3,150	\$6,960
1882.....	9,864,228	734,339	4,269,094	466,345	47,668	112,382
1883.....	6,274,480	461,233	4,696,027	1,069,212	102,253	297,097
1884.....	7,666,717	407,871	3,393,073	1,421,410	314,027	640,847
1885.....	10,663,248	465,827	4,388,893	901,173	89,488	455,477
1886.....	14,992,453	1,122,130	12,357,808	4,281,058	549,452	1,949,498
1887.....	16,560,534	1,121,554	6,698,495	4,233,700	155,846	2,819,736
1888.....	6,377,749	1,752,668	6,509,017	1,100,057	85,931	1,217,199
1889.....	10,409,686	592,017	2,936,752	1,379,722	115,389	307,125
1890.....	13,875,338	910,285	5,135,404	957,966	77,210	486,258
1891.....	14,801,714	1,132,557	6,177,288	883,709	50,195	616,888
1892.....	10,772,622	833,874	5,145,691	2,856,013	537,684	1,695,080
1893.....	9,938,048	563,183	3,406,195	6,659,401	364,268	1,034,420
1894 (6 months).....	28,238,471	528,869	15,557,166	457,231	31,737	596,484
Total	163,807,866	10,914,406	82,590,386	26,685,516	2,524,298	12,235,451

The loss to employees in the establishments in which strikes occurred, for the period of thirteen and one-half years, was \$163,807,866; the loss to employees through lockouts for the same period was \$26,685,516; or a total loss to employees by reason of these two classes of industrial disturbances of \$190,493,382. The number of establishments involved in strikes during this period was 69,167, making an average loss of \$2,368 to employees in each establishment in which strikes occurred. The number of persons thrown out of employment by reason of strikes was 3,714,406, making an average loss of \$44 to each person involved. The number of establishments involved in lockouts was 6,067, making an average loss of \$4,398 to employees in each establishment in which lockouts occurred, while the number of employees locked out was 366,690, making an average loss of \$73 to each person involved. Combining the figures for strikes and lockouts, it is seen that the wage loss to employees as above stated was \$190,493,382 and the number of establishments involved 75,234, while 4,081,096 persons were thrown out of employment. These figures show an average wage loss of \$2,532 to the employees in each establishment and an average loss of \$47 to each person involved.

The assistance given to strikers during the thirteen and one-half years, so far as ascertainable, was \$10,914,406; to those involved in lockouts, \$2,524,298, or a total sum of \$13,438,704. This sum represents but 7.05 per cent of the total wage loss incurred in strikes and lockouts, and is probably too low. In addition to this sum, which includes only assistance from labor organizations, much assistance was furnished by outside sympathizers, the amount of which the Department had no means of ascertaining.

The loss to employers through strikes during this thirteen and one-half years amounted to \$82,590,386; their losses through lockouts amounted to \$12,235,451, making a total loss to the establishments or firms involved in strikes and lockouts during this period of \$94,825,837.

STRIKES AND LOCKOUTS IN GREAT BRITAIN AND IRELAND IN RECENT YEARS.

Since 1888 the statistical and other information concerning labor disturbances in Great Britain and Ireland has been published in the annual reports of the Labor Department of the Board of Trade under the title of Reports by the Chief Labor Correspondent on Strikes and Lockouts, and the information presented herewith has been obtained from those reports. The report for 1888, being the first, is not so comprehensive as those for subsequent years; for this reason, and also to enable a uniform presentation of the various facts, the report for the year 1889 is taken as the starting point, the figures being shown as far as practicable for each year up to and including 1893.

The number of strikes reported for each year is shown in the following statement:

STRIKES, 1889 TO 1893.

Division.	1889.	1890.	1891.	1892.	1893.	Total.
England	813	716	667	512	509	3, 217
Wales	53	88	63	52	48	304
Scotland	246	156	125	110	175	812
Ireland	33	68	38	18	36	193
Total	1, 145	1, 028	893	692	768	4, 526

In counting the number of strikes that occurred in 1889, wherever full details were obtained of separate establishments engaged in a general strike, each establishment was considered as one strike. It was not always possible, however, to obtain full details for all the separate establishments affected by a general strike. In those instances a large number of establishments were counted in the annexed table as only one strike. Owing to the difficulty of ascertaining the actual number of establishments affected and of distinguishing between the number of distinct strikes and the number of establishments involved, the system was changed for 1890 and subsequent years so that each strike, whether general or merely local, was counted as one, irrespective of the number of establishments affected. Under these circumstances it can not be inferred that the strike movement in 1890 was not as violent as in 1889, as the above table seems to indicate. A more accurate comparison for the two years may be made by saying that in 1889 there were 3,164 distinct establishments affected by the 1,145 strikes, but the system of enumeration then adopted was not so clear as in 1890, when 4,382 distinct establishments were reported, supposing where no information is given that only one establishment is concerned.

In some of the following statements the two classes of labor disputes, strikes and lockouts, have been combined, but when practicable they have been treated separately. Comparatively few lockouts occurred in the United Kingdom during the period from 1889 to 1893. The following statement gives the number reported for each year; the great decrease from 1889 to 1890 is probably accounted for by the change in the method of enumeration previously referred to in connection with strikes:

LOCKOUTS, 1889 to 1893.

Year.	Number.	Year.	Number.
1889.....	66	1892.....	8
1890.....	12	1893.....	14
1891.....	13		
		Total	113

Statistics concerning the cause or object of strikes and their success or failure are probably of more importance and interest than those on any other branch of the subject. Space will not permit a detailed statement of the numerous causes and objects of strikes as presented in the several reports. The grouping adopted in the following statement is in a measure arbitrary with this office:

RESULTS OF STRIKES BY CAUSES, 1889 TO 1893.

Cause or object.	Year.	Suc- ceeded.	Suc- ceeded partly.	Failed.	Not re- ported.	Total.
For increase of wages, and the same combined with secondary causes.	1889	342	290	76	60	768
	1890	208	152	109	45	514
	1891	149	74	68	26	317
	1892	125	59	59	17	260
	1893	116	60	68	12	256
Total		940	635	380	160	2,115
Against reduction of wages, and the same com- bined with secondary causes.	1889	12	8	20	5	45
	1890	34	14	30	5	83
	1891	52	31	32	14	129
	1892	40	19	50	15	124
	1893	72	45	67	14	198
Total		210	117	199	53	579
For introduction or enforcement of scale of prices, disputes as to former agreements, etc.	1889	20	10	4	2	36
	1890	23	4	10	5	42
	1891	17	8	12	1	38
	1892	4	3	3	3	13
	1893	6	3	7	2	18
Total		70	28	36	13	147
For reduction of hours; for uniformity of hours, and against increase of hours without correspond- ing increase of wages.	1889	(a)	(a)	(a)	(a)	(a)
	1890	10	6	5	2	23
	1891	14	6	3	.....	23
	1892	7	4	2	1	14
	1893	6	1	2	1	10
Total		b 37	b 17	b 12	b 4	b 70
Against conditions of work, materials, subcon- tracting, shop rules, fines, etc.	1889	c 78	c 40	c 57	c 5	c 180
	1890	57	36	59	12	164
	1891	87	34	60	14	195
	1892	52	21	58	10	141
	1893	39	23	48	5	115
Total		c 313	c 154	c 282	c 46	c 795

a Inseparably combined with strikes of 1889 for the cause immediately following.

b Not including strikes of 1889 inseparably combined with those of the same year for the cause immediately following.

c Including strikes of 1889 for the cause immediately preceding.

RESULTS OF STRIKES BY CAUSES, 1889 TO 1893—Concluded.

Cause or object.	Year.	Suc- ceeded.	Suc- ceeded partly.	Failed.	Not re- ported.	Total.
Against employment of nonunion men, and for adoption or enforcement of union rules, etc.	1889	5	2	17	5	29
	1890	30	4	56	10	100
	1891	24	5	50	5	84
	1892	24	3	27	5	59
	1893	32	9	32	1	74
Total		115	23	182	26	346
Disputes between classes of work people as to work, wages, etc.	1889	9	4	3	2	18
	1890	6	7	12	.....	25
	1891	12	7	10	2	31
	1892	7	4	5	2	18
	1893	18	11	14	2	45
Total		52	33	44	8	137
Defense of or objection to fellow work people (apart from unionism).	1889	7	6	12	4	29
	1890	9	1	23	2	35
	1891	10	11	14	1	36
	1892	14	4	19	2	39
	1893	5	6	15	2	28
Total		45	28	83	11	167
Defense of or objection to superior officials.....	1889	3	1	11	.....	15
	1890	2	4	5	2	13
	1891	3	3	6	4	16
	1892	10	.....	4	1	15
	1893	8	.....	5	1	14
Total		26	8	31	8	73
In sympathy with other strikes and disputes.....	1889	.....	7	5	8	20
	1890	4	1	12	2	19
	1891	.....	1	4	2	7
	1892	.....	.....	1	1	2
	1893	1	1	6	2	10
Total		5	10	28	15	58
Cause not known.....	1889	.....	.....	2	3	5
	1890	1	1	1	7	10
	1891	1	1	4	11	17
	1892	.....	.....	.....	7	7
	1893	.....	.....	.....	.....	.....
Total		2	2	7	28	39
All causes.....	1889	476	368	207	94	1,145
	1890	384	230	322	92	1,028
	1891	369	181	263	80	893
	1892	283	117	228	64	692
	1893	303	159	264	42	768
Total.....		1,815	1,055	1,284	372	4,526

The vast majority of the labor troubles in the United Kingdom have their origin in disputes as to wages. Chiefly they are differences as to amount of wages, although sometimes they are disputes concerning the principle or mode of payment, or of altered systems of work affecting the amount or mode of payment. Considering the total for five years it appears that over half, or 59.5 per cent, of all the strikes were caused by questions concerning the advance or reduction of wages, and that of the strikes for this object 42.7 per cent were successful, 27.9 per cent partly successful, 21.5 per cent unsuccessful, and for 7.9 per cent the result was not reported. Of the total number of strikes for all purposes that occurred during the five years 40.1 per cent were successful, 23.3 per cent partly successful, 28.4 per cent unsuccessful, and for 8.2 per cent the result was not reported.

In connection with the success or failure of strikes it is instructive to consider the number of persons affected. While the number of persons affected is not shown for all of the strikes reported, it is given for a sufficient number to indicate the relative number of persons affected by the disturbances that terminated successfully or otherwise for the workmen, and a summary of the totals for the different years is as follows:

PERSONS AFFECTED BY STRIKES, 1889 TO 1893, BY RESULTS.

[Persons affected means persons thrown out of work, whether actually striking or not.]

Result.	Year.	Total strikes.	Strikes for which persons affected were reported.	
			Number.	Persons affected.
Succeeded	1889	476	304	93,524
	1890	384	275	213,867
	1891	369	289	68,247
	1892	283	235	48,852
	1893	303	271	400,141
Total .....	.....	1,815	1,374	824,631
Succeeded partly	1889	368	274	177,476
	1890	230	188	66,029
	1891	181	156	98,127
	1892	117	103	113,414
	1893	159	148	155,249
Total .....	.....	1,055	869	610,295
Failed	1889	207	171	40,472
	1890	322	254	101,902
	1891	263	212	92,763
	1892	228	203	70,978
	1893	264	233	76,430
Total .....	.....	1,284	1,073	382,545
Not reported	1889	94	32	10,528
	1890	92	21	11,183
	1891	80	19	7,748
	1892	64	27	3,554
	1893	42	13	1,709
Total .....	.....	372	112	34,722
Aggregate	1889	1,145	781	322,000
	1890	1,028	738	392,981
	1891	893	676	266,885
	1892	692	568	236,798
	1893	768	665	633,529
Total .....	.....	4,526	3,428	1,852,193

Of the 4,526 strikes that occurred during the five years covered by this statement, particulars concerning the number of persons affected and the results were obtained for 3,428, or 75.7 per cent. These strikes affected 1,852,193 persons. The strikes that terminated successfully affected 44.5 per cent of the total number of persons; those that succeeded partly, 32.9 per cent; unsuccessful, 20.7 per cent, and those for which the result was not reported, 1.9 per cent. The successful and partly successful strikes combined affected 77.4 per cent of the total number of persons. The average number of persons affected by each of the successful or partly successful strikes was 640, by the unsuccessful strikes 357, and by the strikes for which definite information as to the result was not obtained 310.

The time over which industrial stoppages extend, when considered in connection with the number of persons affected, conveys an idea of the magnitude of the disturbances. The statistics on this subject for the different years are presented in the following statement:

DURATION OF STRIKES, 1889 TO 1893.

Year.	Total strikes.	Strikes for which duration was reported.		
		Number.	Days of duration.	
			Number.	Average per strike.
1889.....	1, 145	840	15, 100	18. 0
1890.....	1, 028	794	13, 724	17. 3
1891.....	893	687	16, 528	24. 1
1892.....	692	555	17, 800	32. 1
1893.....	768	575	16, 927	29. 4
Total	4, 526	3, 451	80, 079	23. 2

The number of really large strikes is shown by the following analysis: In 1891 there were 9 strikes, of those reporting the number of persons affected, in which 5,000 persons and upward were involved; 45 in which 1,000 to 5,000 persons were affected, and 622 in which less than 1,000 persons were affected. The Report by the Chief Labor Correspondent on the Strikes and Lockouts of 1892 reports for that year but 8 strikes and lockouts affecting 5,000 persons and upward, 34 affecting 1,000 to 5,000, and 530 affecting less than 1,000. In 1893, 10 strikes and lockouts involved 5,000 persons and upward, 31 from 1,000 to 5,000, and 638 less than 1,000.

The number of persons affected by labor disputes, and the duration of such disputes, though interesting in themselves, become more important when brought into relation with each other. This has been done for both strikes and lockouts in the statements which follow so as to show the average days of time lost by the persons affected.

TIME LOST AND PERSONS AFFECTED BY STRIKES AND LOCKOUTS, 1890 TO 1893.

[Persons affected means persons thrown out of work.]

Year.	Total strikes and lockouts.	Strikes and lockouts for which both persons affected and lost time were reported.			
		Number.	Persons affected.	Days of lost time.	
				Number.	Average per person affected
1890	1, 040	652	373, 650	7, 317, 469	19. 5
1891	906	606	258, 718	6, 809, 371	26. 3
1892	700	503	351, 243	17, 248, 376	49. 1
1893	782	586	627, 969	31, 205, 062	49. 7
Total	3, 428	2, 347	1, 611, 580	62, 580, 278	38. 8

DURATION OF AND PERSONS AFFECTED BY STRIKES AND LOCKOUTS IN 1893, BY INDUSTRIES.

[Persons affected means persons thrown out of work.]

Industries.	Total strikes and lock-outs.	Strikes and lockouts for which both persons affected and duration were reported.					
		Num-ber.	Persons affected.	Days of duration.		Days of lost time.	
				Number.	Aver-age per dispute.	Number.	Aver-age per person affected
Building and furnishing trades, coach making and coopers.....	198	155	19, 976	5, 882	37. 9	866, 971	43. 4
Clothing (including saddle and harness trade).....	82	59	10, 266	1, 885	31. 9	204, 513	19. 9
Domestic (a)	25	16	5, 529	501	31. 3	388, 569	70. 3
Labor (b).....	30	19	1, 247	134	7. 0	7, 646	6. 1
Metal (including shipbuilding, engineering, etc.).....	136	113	29, 662	3, 802	33. 6	863, 578	29. 1
Mining and quarrying.....	156	110	501, 724	3, 063	27. 8	27, 977, 893	55. 7
Printing, paper, and book trades...	7	4	286	116	29. 0	7, 119	24. 9
Textile trades.....	105	80	44, 790	1, 583	19. 8	422, 184	9. 4
Transport (land and water).....	43	30	14, 489	370	12. 3	466, 589	32. 2
Total.....	782	586	627, 969	17, 336	29. 6	31, 205, 062	49. 7

a Comprises food and drink preparation, tobacco, brush makers, and glass and pottery trades.
b Comprises chemical and gas workers, public cleansing, agricultural, general, unskilled, and female labor.

In the majority of cases the largest disputes in point of numbers were also those for which the duration was the longest. For this reason the average duration per dispute is considerably less than the average number of working days lost per person involved.

With one exception the preceding statements have presented the statistics by totals for years only. In the following summary the strikes and lockouts of the four years from 1890 to 1893 are arranged by general groups of trades. This statement shows the number of disturbances in each group, the number for which the persons affected were reported, and the number of persons affected by such strikes and lockouts.

PERSONS AFFECTED BY STRIKES AND LOCKOUTS, 1890 TO 1893, BY INDUSTRIES.

[Persons affected means persons thrown out of work. It will be noticed that the figures reported below do not agree in every case with the figures given on page 30. The explanation is not known.]

Industries.	Total strikes and lockouts.				Strikes and lockouts for which persons affected were reported.								Average persons affected per dispute.
					Number.				Persons affected.				
	1890.	1891.	1892.	1893.	1890.	1891.	1892.	1893.	1890.	1891.	1892.	1893.	
Building trades	117	149	149	170	83	123	115	152	12, 558	25, 229	18, 175	17, 738	156
Chemical and gas works	10	4	3	5	7	4	3	5	1, 218	118	193	427	103
Cabinetmaking and furniture trades..	18	18	9	20	15	11	7	15	2, 142	317	312	366	65
Clothing trades	78	66	56	80	47	55	49	71	29, 317	40, 992	36, 431	10, 821	530
Coach building and coopers	5	9	6	8	3	8	5	6	200	680	477	2, 495	175
Domestic trades....	10	11	8	5	5	7	6	5	487	627	425	56	69
Food, tobacco, and drink preparation	21	18	12	9	18	17	12	9	3, 704	3, 271	1, 516	549	161
Glass and pottery trades.....	11	12	8	11	6	10	7	10	3, 070	3, 534	20, 369	5, 211	975
Labor (agricultural and general unskilled)	29	18	19	25	21	11	12	17	2, 293	1, 967	1, 031	958	102
Leather and rubber trades.....	11	5	5	2	9	3	5	2	498	169	717	30	74
Metal trades (including ship-building).....	201	165	129	136	149	123	108	124	81, 936	60, 502	39, 759	30, 309	422
Mining and quarrying	101	132	109	156	80	96	86	133	140, 292	51, 427	120, 386	506, 182	2, 072
Paper, printing, and bookbinding trades	11	20	7	7	8	14	7	7	356	1, 291	708	381	76
Textile trades.....	241	217	137	105	183	164	117	89	42, 035	44, 837	102, 722	45, 274	425
Transport.....	164	62	41	43	105	42	35	34	72, 875	32, 499	12, 878	15, 589	620
Theatrical employees	-----	-----	2	-----	-----	-----	2	-----	-----	-----	700	-----	350
Total.....	1, 028	906	700	782	739	688	576	679	392, 981	267, 460	356, 799	636, 386	617

Considering the totals for the four years, the greatest number of disturbances are reported for the textile trades, while those involving the greatest number of employees are in mining and quarrying. The textiles rank second in the number of persons affected, the metal trades second in number of disturbances and third in number of persons affected, the building trades third in number of disturbances and fourth in number of persons affected, while mining and quarrying, the first in the number of persons, is fourth in number of disturbances. The magnitude of the average disturbance in the different trades is also indicated in the above statement by the average number of persons affected, the average being obtained from the totals of the four years. The disturbances in the mining and quarrying industries affected, on an average, the largest number of persons, and were followed in point of magnitude by the glass and pottery trades.

Having presented data as to the number, magnitude, and immediate results of strikes, the statistics next in order are those pertaining to the modes of settling the disputes. The different methods of settling

strikes and the number of persons affected by each class during 1891, 1892, and 1893 are shown in the following summary:

MODE OF SETTLEMENT OF STRIKES, 1891 TO 1893.

[Persons affected means persons thrown out of work, whether actually striking or not.]

Mode of settlement.	Year.	Strikes settled.		
		Number.	Strikes for which persons affected were reported.	
			Number.	Persons affected.
By conciliation.....	1891	468	373	120, 579
	1892	341	283	55, 763
	1893	388	347	132, 393
By conciliation (by mediation).....	1891	9	9	9, 464
	1892	4	4	76, 144
	1893	8	8	300, 622
By arbitration.....	1891	18	15	12, 387
	1892	19	17	32, 637
	1893	25	24	12, 124
By submission of work people.....	1891	130	103	65, 724
	1892	115	108	37, 224
	1893	119	104	63, 676
By hands being replaced.....	1891	87	67	6, 149
	1892	79	66	3, 729
	1893	104	90	4, 273
By conciliation and submission.....	1891	41	36	20, 249
	1892	33	30	21, 996
	1893	44	43	114, 277
By conciliation and hands being replaced.....	1891	11	9	1, 927
	1892	13	11	1, 748
	1893	6	6	803
By submission and hands being replaced	1891	39	37	20, 416
	1892	22	20	3, 891
	1893	22	20	1, 977
By disappearance or withdrawal of cause of dispute without mutual agreement.	1891	12	9	2, 268
	1892	2	2	112
	1893	3	3	425
Indefinite: no details obtainable as to settlement, or establishment closed.	1891	78	18	7, 728
	1892	64	27	3, 554
	1893	49	20	2, 959

Much the larger proportion of the strikes for each of the three years covered by this statement were settled by conciliation. Next to conciliation the greatest number of strikes, according to the classification adopted, appear to have been settled by the submission of the work people.

While the available information concerning loss or gain resulting from strikes is not as complete as could be desired, the information secured is of value when considered in connection with the other statistics on this general subject. According to returns received from employers with regard to the cost of strikes in 1893, there were 257 strikes which directly affected (a) 139,168 persons whose weekly wages

a What the distinction is between those directly affected and those indirectly affected is not made clear, but it is believed that the former expression refers to strikers only, and the latter to others thrown out of employment in consequence of the strike.

before the strikes amounted to \$863,045, and 43 strikes which indirectly affected 18,714 persons whose weekly wages before the strikes amounted to \$124,904. In 123 strikes, affecting 120,127 persons, an estimated fixed capital of \$78,522,559 was laid idle, and 80 strikes, affecting 104,811 persons, laid idle property whose estimated ratable value was \$3,416,911. In 109 strikes, affecting 135,230 persons, the estimated outlay by employers in stopping and reopening works and in payment of fixed charges and salaries was \$1,676,354, and the cost to employers in resisting 6 strikes, affecting 8,487 persons, was \$34,980.

Reports from trade unions relating to loss and gain from strikes indicate that in 1893 there were 265 strikes, affecting 239,898 persons, whose weekly wages before the strikes amounted to \$1,260,107. Weekly wages both before and after the strikes were reported for 209 strikes, affecting 236,527 persons, whose weekly wages were \$1,237,931 before and \$1,287,554 after the strikes. In 73 strikes the weekly gain in wages to the 116,249 persons affected was \$39,024, and in 21 strikes the weekly reduction to the 2,523 persons affected was \$1,557. In 224 strikes, which affected 223,679 persons, the estimated wage loss during the strikes was \$8,952,929, the amount expended by trade unions in support of 240 strikes affecting 92,608 persons was \$617,457, and the amount expended from other than trade-union funds in support of 37 strikes, affecting 21,171 persons, was \$119,701. In 313 strikes 88,940 of the number affected belonged to trade unions.

The statistics for lockouts have, of necessity, been included in some of the preceding statements presenting the data for strikes. In some instances it was practically impossible to obtain a separation of the persons affected by the lockout from those affected by the strike; therefore the statistics for lockouts as a distinct class of labor disturbances are not as complete as may be desired. The following statement gives the number of persons affected by and the duration of the lockouts in the United Kingdom, so far as reported, for the years 1891, 1892, and 1893:

DURATION OF AND PERSONS AFFECTED BY LOCKOUTS, 1891 TO 1893.

[Persons affected means persons thrown out of work.]

Year.	Total lockouts.	Lockouts for which persons affected were reported.			Lockouts for which duration was reported.		
		Number.	Persons affected.	Average persons affected per lockout.	Number.	Days of duration.	Average days of duration per lockout.
1891	13	11	575	52	6	224	37.3
1892	8	8	120,001	15,000	6	186	31.0
1893	14	14	2,857	204	11	409	37.2
Total.....	35	33	123,433	3,740	23	819	35.6

The prevailing causes or objects of lockouts and the manner of their termination, i. e., whether successful or otherwise from the employers' point of view, are shown by the following statement:

RESULTS FOR LOCKOUTS BY CAUSES, 1891 TO 1893.

Cause or object.	Year.	Suc- ceeded.	Suc- ceeded partly.	Failed.	Not re- ported.	Total.
Against advance of wages and other demands.....	1891	1	1	2	.....	4
	1892	.....	.....	.....	.....	.....
	1893	1	1	.....	.....	2
To enforce a reduction of wages.....	1891	2	.....	.....	.....	2
	1892	.....	1	.....	.....	1
	1893	1	.....	.....	.....	1
Against, or to enforce alteration of working arrange- ments, rules, methods of payment, foreign mate- rials, short time, etc.	1891	2	.....	.....	.....	2
	1892	.....	1	3	1	5
	1893	2	4	1	.....	7
Unionism, as to employment of union or nonunion men, union rates of wages, etc.	1891	4	.....	1	.....	5
	1892	1	.....	.....	.....	1
	1893	3	1	.....	.....	4
To end a long-standing strike.....	1892	.....	.....	1	.....	1
All causes.....	1891	9	1	3	.....	13
	1892	1	2	4	1	8
	1893	7	6	1	.....	14
Total		17	9	8	1	35

In 17 of the 35 lockouts reported for the three years the employers accomplished the object for which the lockout was organized, in 8 lockouts they failed, in 9 cases they were partly successful, there being 1 lockout for which the result was not reported.

According to returns received from employers with regard to the cost of lockouts in 1893 there were 6 lockouts which directly affected 837 persons whose weekly wages before the lockouts amounted to \$7,144. In 1 lockout, affecting 637 persons, an estimated capital of \$121,663 was laid idle, and 2 lockouts, affecting 664 persons, laid idle property whose estimated ratable value was \$39,467. In 3 lockouts, affecting 772 persons, the cost to the employers in stopping and reopening works, and in payment of fixed charges and salaries, was \$1,898.

Reports from trade unions relating to loss and gain from lockouts indicate that in 1893 there were 7 lockouts, affecting 1,763 persons, whose weekly wages before the lockouts amounted to \$13,436. Weekly wages both before and after the lockouts were reported for 5 lockouts, affecting 1,437 persons, whose weekly wages were \$10,604 before and \$11,392 after the lockouts. In 1 lockout the weekly gain in wages to the 650 persons affected was \$788. In 5 lockouts, affecting 1,743 persons, the estimated wage loss during the lockouts was \$48,874, the amount expended by trade unions in defense against 5 lockouts, affecting 778 persons, was \$15,680, and the amount expended from other than trade-union funds in defense against 2 lockouts, affecting 364 persons, was \$112. In 9 lockouts 1,706 of the number affected belonged to trade unions.

STRIKES IN FRANCE IN RECENT YEARS.

The report of the French Office du Travail, Statistique des Grèves et des Recours à la Conciliation et à l'Arbitrage Survenus Pendant l'Année, 1894, gives some interesting figures as the result of its annual inquiry into the subject of strikes and lockouts in France. The report shows that during 1894 there were 391 strikes, involving 1,731 establishments and 54,576 strikers, and a loss of work on the part of the strikers and their fellow-employees amounting to 1,062,480 days. In 1893 there were strikes affecting 4,286 establishments and 170,123 strikers. The loss to employees reached 3,174,000 working days.

In 1894, out of the total of 391 strikes, 84, or 21.48 per cent of them, succeeded; 129, or 32.99 per cent, succeeded partly, and 178, or 45.53 per cent, failed entirely. In 1893 the proportions were: 158 strikes, or 24.92 per cent, succeeded; 206, or 32.49 per cent, succeeded partly, and 270, or 42.59 per cent, failed. In 1894, taking into account the number of strikers involved, 23.63 per cent of the strikers succeeded, 45.41 per cent succeeded partly, and 30.96 per cent failed. In 1893 the proportions in regard to number of strikers were 21.27 per cent, 26.36 per cent, and 52.37 per cent, respectively.

Of the strikes reported in 1894, in 295 cases but 1 establishment was involved; in 32 cases from 2 to 5 establishments were involved; in 18 cases from 6 to 10 establishments; in 26 cases from 11 to 25; in 17 cases from 26 to 50; in 2 cases from 51 to 100, and in 1 case 125.

The two following tables summarize the strikes and strikers for 1894, classifying them by industries and by results. The first table shows for each industry the number of strikes and the number of establishments involved, classifying them according as the strikes succeeded, succeeded partly, or failed. The total strikes and establishments are also shown. The second table shows for each industry the number of strikers, classifying them according as they were involved in successful strikes, partly successful strikes, or in strikes that failed. The total strikers and days of work lost are also given. The column in this table headed "Days of work lost" refers here, as well as in the tables which follow, to days lost not only by strikers but by those employees who were thrown out of work by the strike.

STRIKES IN 1894, BY INDUSTRIES.

Industry.	Succeeded.		Succeeded partly.		Failed.		Total.	
	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.
Agriculture, forestry, and fish-eries	5	16	13	36	3	13	21	65
Mining	2	2	4	4	1	1	7	7
Quarrying	5	15	4	17	4	5	13	37
Food products			4	50	4	29	8	79
Chemical industries.....	2	3	4	5	5	5	11	13
Printing	1	1	1	1	8	8	10	10
Hides and leather.....	7	80	10	11	11	87	28	178
Textiles proper.....	13	67	44	140	55	126	112	333
Clothing and cleaning	2	2	5	49	3	21	10	72
Woodworking	6	45	5	19	11	19	22	83
Building trades (woodwork)...	2	34	5	90	2	13	9	137
Metal refining	1	1	2	2			3	3
Metallic goods	10	41	10	28	28	46	48	115
Precious-metal work.....	2	2			1	1	3	3
Stonecutting and polishing, glass and pottery works	5	23	3	35	12	17	20	75
Building trades (stone, earthen-ware, glass, etc.).....	18	105	14	225	23	94	55	424
Transportation and handling..	3	22	1	1	7	74	11	97
Total	84	459	129	713	178	559	391	1,731

STRIKERS IN 1894, BY INDUSTRIES.

Industry.	In suc-cessful strikes.	In partly successful strikes.	In strikes which failed.	Total strikers.	Days of work lost.
Agriculture, forestry, and fisheries	530	1,255	628	2,413	23,003
Mining.....	150	2,415	200	2,765	178,964
Quarrying	427	620	380	1,427	13,216
Food products		143	178	321	1,237
Chemical industries.....	850	781	926	2,557	7,088
Printing	10	65	86	161	3,413
Hides and leather.....	1,567	507	2,554	4,628	47,086
Textiles proper.....	4,044	14,549	4,868	23,461	308,225
Clothing and cleaning.....	130	235	630	995	50,524
Woodworking	518	265	423	1,206	26,151
Building trades (woodwork).....	108	396	32	536	10,197
Metal refining.....	18	1,193		1,216	57,112
Metallic goods	583	521	873	1,977	36,758
Precious-metal work.....	8		11	19	301
Stonecutting and polishing, glass and pottery works.....	2,268	74	1,459	3,801	266,978
Building trades (stone, earthenware, glass, etc.)...	1,466	1,740	2,752	5,958	29,763
Transportation and handling	220	20	895	1,135	2,464
Total.....	12,897	24,784	16,895	54,576	1,062,480

From these tables it appears that the textile industries proper had the greatest number of strikes during the year, 112, or nearly 30 per cent of the whole number—building trades (stone, earthenware, glass, etc.) following with 55, and metallic goods with 48. Judged by importance of the disturbances as shown by the number of strikers and days of work lost, the textile industries proper still lead with 23,461 strikers and 308,225 days lost. According to number of strikers, building trades (stone, earthenware, glass, etc.) come second with 5,958 strikers, and hides and leather third with 4,628 strikers. According to days of work lost, however, stonecutting and polishing, glass and pottery works come second, and mining, which had but 7 strikes, comes third.

The following summaries, by causes, show for each cause the same facts that in the preceding tables were shown for each industry:

STRIKES IN 1894, BY CAUSES.

Cause or object.	Succeeded.		Succeeded partly.		Failed.		Total.	
	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.
For increase of wages.....	37	290	69	604	73	215	179	1, 109
Against reduction of wages...	18	50	28	28	34	83	80	161
For increase of hours of labor.	2	2	.....	.....	1	17	3	19
For reduction of hours of labor, with present or increased wages	12	145	6	61	12	105	30	311
Relating to time and method of payment of wages, etc.....	4	5	2	2	3	34	9	41
For or against modification of conditions of work.....	8	49	6	34	19	138	33	221
Against piecework	4	5	3	5	2	2	9	12
For or against modification of shop rules.....	2	2	3	3	3	3	8	8
For abolition or reduction of fines	2	2	4	4	5	5	11	11
Against discharge of workmen, foremen, or directors, or for their reinstatement....	3	3	6	10	19	37	28	50
For discharge of workmen, foremen, or directors.....	14	16	2	2	34	35	50	53
Against the employment of women	1	1	.....	.....	4	4	5	5
For discharge of apprentices or limitation in number.....	.....	.....	.....	.....	2	2	2	2
To support the demands of neighboring woodcutters....	1	1	.....	.....	.....	.....	1	1
Total (a)	108	571	129	753	211	680	448	2, 004

a A considerable number of strikes were due to two or three causes, and the facts in such cases have been tabulated under each cause. Hence the totals for this table necessarily do not agree with those for the table on the preceding page.

STRIKERS IN 1894, BY CAUSES.

Cause or object.	In suc-cessful strikes.	In partly suc-cessful strikes.	In strikes which failed.	Total strikers.	Days of work lost.
For increase of wages.....	7, 664	16, 602	6, 434	30, 700	601, 899
Against reduction of wages.....	3, 620	2, 979	2, 662	9, 261	150, 655
For increase of hours of labor.....	430	.....	306	736	1, 386
For reduction of hours of labor, with present or increased wages.....	1, 044	385	951	2, 380	38, 392
Relating to time and method of payment of wages, etc.....	198	116	337	651	4, 622
For or against modification of conditions of work..	1, 486	316	4, 540	6, 342	243, 734
Against piecework.....	324	288	215	827	14, 045
For or against modification of shop rules.....	53	128	148	329	1, 875
For abolition or reduction of fines.....	103	507	384	994	6, 353
Against discharge of workmen, foremen, or direct-ors, or for their reinstatement.....	662	2, 551	2, 008	5, 221	246, 609
For discharge of workmen, foremen, or directors.	1, 601	210	4, 376	6, 187	239, 536
Against the employment of women.....	30	.....	193	223	5, 978
For discharge of apprentices or limitation in num-ber .....	.....	.....	32	32	489
To support the demands of neighboring wood-cutters	30	.....	.....	30	90
Total (a)	17, 245	24, 082	22, 586	b 56, 813	1, 555, 663

a A considerable number of strikes were due to two or three causes, and the facts in such cases have been tabulated under each cause. Hence the totals for this table necessarily do not agree with those for the table on the preceding page.

b Figures here apparently should be 63,913; those given are, however, according to the original.

It will be seen that more than one-half of all the strikes were caused by some difference in regard to wages, 179 being for an increase of wages and 80 being against a reduction of wages. Strikes for a reduc-

tion in the hours of labor were comparatively few, there being but 30 such during the year.

The number of strikers per 1,000 working people employed in each industry (according to the census of 1891) is shown in another short table as follows:

STRIKERS PER 1,000 EMPLOYEES IN 1894, BY INDUSTRIES.

Industry.	Strikes.	Strikers.	Strikers per 1,000 work people.	Days of work lost.
Agriculture and forestry (woodmen and charcoal burners only)	21	2, 413	33. 63	23, 003
Mining	7	2, 765	} 20. 23	{ 178, 964
Quarrying	13	1, 427		
Food products.....	8	321	2. 50	1, 237
Chemical industries.....	11	2, 557	69. 89	7, 088
Printing.....	10	161	1. 66	3, 413
Hides and leather.....	28	4, 628	37. 16	47, 086
Textiles proper.....	112	23, 461	22. 65	308, 225
Clothing and cleaning.....	10	995	1. 41	50, 524
Woodworking.....	22	1, 206	13. 07	26, 151
Building trades (woodwork).....	9	536	(a)	10, 197
Metal refining.....	3	1, 216	12. 74	57, 112
Metallic goods.....	48	1, 977	6. 51	36, 758
Precious-metal work.....	3	19	-----	301
Stonecutting and polishing, glass and pottery works.....	20	3, 801	36. 54	266, 978
Building trades (stone, earthenware, glass, etc.).....	55	5, 958	b 15. 08	29, 763
Transportation and handling.....	11	1, 135	4. 61	2, 464
Total	391	54, 576	19. 83	1, 062, 480

a Included with building trades (stone, earthenware, glass, etc.).
b Includes building trades (woodwork).

This table shows perhaps better than any other the relative amount of disturbances in the various industries. It will be seen that in all industries shown, 19.83 out of every 1,000 persons employed were engaged in strikes during the year. In textile industries proper, where are found nearly 30 per cent of all the strikes, are found 22.65 strikers per 1,000 employees, a slight excess over the average of all industries, while in building trades (stone, earthenware, glass, etc.) and metallic goods, respectively second and third as regards number of strikes, are found but 15.08 and 6.51 strikers per 1,000 employees.

The strikes and strikers, classified by results and by the duration of the strikes, are presented in the table which follows:

STRIKES AND STRIKERS, BY DURATION OF STRIKES, 1894.

Days of duration.	Strikes.				Strikers.			
	Suc- ceeded.	Suc- ceeded partly.	Failed.	Total.	Suc- ceeded.	Suc- ceeded partly.	Failed.	Total.
7 or under.....	58	72	102	232	a 8, 591	7, 722	8, 270	24, 713
8 to 15.....	14	34	34	82	1, 796	4, 298	2, 587	8, 681
16 to 30.....	6	10	20	36	234	2, 024	3, 353	5, 611
31 to 100.....	5	12	18	35	2, 076	9, 075	1, 435	12, 586
101 or over.....	1	1	4	6	70	1, 665	1, 250	2, 985
Total.....	84	129	178	391	12, 897	24, 784	16, 895	54, 576

a Figures here apparently should be 8,721; those given are, however, according to the original.

.It will be seen that most of the strikes, whether successful or not, are of short duration. Nearly 60 per cent in 1894 lasted but a week or less, and only about 10 per cent were of more than a month's duration.

Duration of strikes is presented in another way in the following short table. The strikes are here classified according to number of strikers involved, and for each group the results and days of duration are shown.

DURATION OF STRIKES IN 1894, BY NUMBER OF STRIKERS INVOLVED.

Strikers involved.	Strikes.				Days of duration.				
	Suc- ceeded.	Suc- ceeded partly.	Failed.	Total.	1 to 7.	8 to 15.	16 to 30.	31 to 100.	101 or over.
25 or under.....	21	27	71	119	75	20	11	12	1
26 to 50.....	16	28	34	78	49	18	7	4	.....
51 to 100.....	23	36	35	94	58	16	9	9	2
101 to 200.....	10	21	22	53	26	16	6	4	1
201 to 500.....	10	10	10	30	16	12	.....	2	.....
501 to 1,000.....	2	1	4	7	6	.....	1	.....	.....
1,001 to 5,000.....	2	5	2	9	2	.....	2	3	2
5,001 or over.....	.....	1	.....	1	.....	.....	.....	1	.....
Total.....	84	129	178	391	232	82	36	35	6

This table shows that a large number of the strikes are not only of short duration, but that they are small as regards number of strikers involved. In 119 cases 25 strikers or less were involved, and in 291 cases, 100 strikers or less.

Earlier reports of the Office du Travail give the facts for the years 1890 to 1893. A comparison of the figures for the several years shows a considerable variation in the number and importance of labor disturbances during the several years presented.

The first of the following tables gives the facts, so far as reported, as to number of strikes, establishments involved, strikers, and days of work lost for the years 1890 to 1894.

STRIKES, ESTABLISHMENTS, STRIKERS, AND DAYS OF WORK LOST, 1890 TO 1894.

Year.	Strikes.	Establish- ments.	Strikers.	Days of work lost.
1890.....	313	<i>a</i> 813	<i>b</i> 118, 929	.....
1891.....	267	<i>c</i> 402	<i>d</i> 108, 944	.....
1892.....	261	<i>e</i> 466	<i>f</i> 47, 903	920, 000
1893.....	634	4, 286	170, 123	3, 174, 000
1894.....	391	1, 731	54, 576	1, 062, 480
Total	1, 866	7, 698	500, 475	5, 156, 480

a In 33 strikes the number of establishments was not reported.
b In 8 strikes the number of strikers was not reported.
c In 24 strikes the number of establishments was not reported.
d In 2 strikes the number of strikers was not reported.
e In 16 strikes the number of establishments was not reported.
f In 8 strikes the number of strikers was not reported.

A second table shows the number and per cent of strikes which succeeded, succeeded partly, and failed in each of the years of the same period, 1890 to 1894.

NUMBER AND PER CENT OF STRIKES BY RESULTS, 1890 TO 1894.

Year.	Succeeded.		Succeeded partly.		Failed.		Not reported.		Total.	
	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.
1890.....	82	26.20	64	20.45	161	51.44	6	1.91	313	100
1891.....	91	34.08	67	25.10	106	39.70	3	1.12	267	100
1892.....	56	21.46	80	30.65	118	45.21	7	2.68	261	100
1893.....	158	24.92	206	32.49	270	42.59	.....	.....	634	100
1894.....	84	21.48	129	32.99	178	45.53	.....	.....	391	00
Total	471	25.24	546	29.26	833	44.64	16	.86	1,866	100

The per cent of successful strikes during the five years reported varies from 21.48 in 1894 to 34.08 in 1891, and the average for the period is 25.24 per cent. The average of those which succeeded partly is 29.26 per cent and of those which failed 44.64 per cent.

The last table deals with strikers in the same way. It shows the number and per cent of strikers who were involved in strikes which succeeded, succeeded partly, and failed.

NUMBER AND PER CENT OF STRIKERS, BY RESULTS OF STRIKES, 1890 TO 1894.

Year.	In successful strikes.		In partly successful strikes.		In strikes that failed.		Not reported.		Total.	
	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.
1890.....	13,361	11.23	28,013	23.55	76,075	63.97	1,480	1.25	118,929	100
1891.....	22,449	20.61	54,237	49.78	32,109	29.47	149	.14	108,944	100
1892.....	9,774	20.40	23,820	49.73	14,179	29.60	130	.27	47,903	100
1893.....	36,186	21.27	44,836	26.36	89,101	52.37	.....	.....	170,123	100
1894.....	12,897	23.63	24,784	45.41	16,895	30.96	.....	.....	54,576	100
Total	94,667	18.92	175,690	35.10	228,359	45.63	1,759	.35	500,475	100

STRIKES IN ITALY IN RECENT YEARS.

The Statistica degli Scioperi avvenuti nell' Industria e nell' Agricoltura durante gli anni 1892 e 1893 furnishes the data for the accompanying statement concerning strikes in Italy in recent years.

The number of these industrial disturbances during each of the years from 1879 to 1893 is shown in the following table, together with the number of strikers involved in strikes reporting as to number involved:

NUMBER OF STRIKES AND STRIKERS, 1879 TO 1893.

Year.	Strikes.		Strikers.		Year.	Strikes.		Strikers.	
	Total.	Report- ing num- ber of strikers.	Total.	Aver- age per strike.		Total.	Report- ing num- ber of strikers.	Total.	Aver- age per strike.
1879	32	28	4,011	143	1887	69	68	25,027	368
1880	27	26	5,900	227	1888	101	99	28,974	293
1881	44	39	8,272	212	1889	126	125	23,322	187
1882	47	45	5,854	130	1890	139	133	38,402	289
1883	73	67	12,900	193	1891	132	128	34,733	271
1884	81	81	23,967	296	1892	119	117	30,800	263
1885	89	86	34,166	397	1893	131	127	32,109	253
1886	96	96	16,951	177					

During the last two years included in the table strikes occurred with greater frequency in Lombardy and Piedmont than in any other of the provinces of Italy, they being the centers of industrial activity. In Sicily, however, quite a large number occurred also. These were confined mostly to the sulphur mines, where almost the whole of the workmen struck and where the difficulties were most frequent.

The distribution of the strikes as to the causes for which undertaken for the period from 1878 to 1891, for 1892, and for 1893 is shown in the following table:

CAUSES OF STRIKES, 1878-1891, 1892, AND 1893.

[In each of the years under consideration some of the strikes have been omitted, neither cause of strike nor number of strikers having been reported.]

Cause or object.	1878-1891.				1892.				1893.			
	Strikes.		Strikers.		Strikes.		Strikers.		Strikes.		Strikers.	
	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.
For increase of wages.	522	52	152,908	60	39	34	6,642	22	51	42	13,386	42
For reduction of hours	70	7	10,064	4	4	3½	1,790	6	11	9	1,519	5
Against reduction of wages	110	11	23,207	9	23	20	7,551	25	22	18	3,931	12
Against increase of hours	20	2	5,646	2	4	3½	630	2	1	1	300	1
Other causes	276	28	62,843	25	44	39	13,571	45	36	30	12,492	40
Total classified.	998	100	254,668	100	114	100	30,184	100	121	100	31,628	100
Not classified	77	.....	.....	.....	5	.....	.....	.....	10	.....	.....	.....
Grand total	1,075	.....	.....	.....	119	.....	.....	.....	131	.....	.....	.....

In the last of the five groups are combined many causes, among which may be mentioned the following: Differences as to manner of payment of wages, whether weekly or fortnightly, etc.; as to the amount and methods of fines; as to cooperation of strikers; as to special technical conditions, etc. The per cent columns bring out very clearly the proportion of strikes falling under each cause. During the period from 1878 to 1891 64 per cent of the strikers engaged in strikes for the purpose of ameliorating their condition, while in 1892 28 per cent and in 1893 47 per cent of all persons involved were engaged in such strikes. On the other hand, only 11 per cent of the strikers were engaged in struggles to prevent a decrease of wages for the period from 1878 to 1891, 27 per cent in 1892, and only 13 per cent in 1893.

The table which follows shows the results of strikes for the period from 1878 to 1891, for 1892, and for 1893, so far as the strikers were concerned, classifying the strikes as having succeeded, partly succeeded, or failed in the object or cause for which they were undertaken.

RESULTS OF STRIKES, 1878-1891, 1892, AND 1893.

[In each of the years under consideration some of the strikes have been omitted, neither cause of strike nor number of strikers having been reported.]

Cause or object.	Succeeded.				Succeeded partly.				Failed.			
	Strikes.		Strikers.		Strikes.		Strikers.		Strikes.		Strikers.	
	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.
For increase of wages:												
1878-1891.....	88	17	43,931	29	242	46	74,650	49	192	37	34,327	22
1892.....	9	23	1,078	16	13	33	2,050	31	17	44	3,514	53
1893.....	15	30	6,071	45	18	35	4,713	35	18	35	2,602	20
For reduction of hours:												
1878-1891.....	14	20	3,612	36	28	40	2,449	24	28	40	4,003	40
1892.....	1	25	1,500	84	1	25	40	2	2	50	250	14
1893.....	5	46	581	38	4	36	815	54	2	18	123	8
Against reduction of wages:												
1878-1891.....	14	13	2,700	12	47	43	11,744	50	49	44	8,763	38
1892.....	7	30	3,660	48	7	30	1,628	22	9	40	2,263	30
1893.....	5	23	840	21	10	45	1,341	34	7	32	1,750	45
Against increase of hours:												
1878-1891.....	7	35	2,540	45	8	40	2,750	49	5	25	356	6
1892.....					2	50	350	56	2	50	280	44
1893.....					1	100	300	100				
Other causes:												
1878-1891.....	36	13	9,553	15	104	38	27,441	44	136	49	25,849	41
1892.....	7	16	2,398	18	10	23	1,764	13	27	61	9,409	69
1893.....	9	25	1,705	14	13	36	6,601	53	14	39	4,186	33
All causes:												
1878-1891.....	159	16	62,336	24	429	43	119,034	47	410	41	73,298	29
1892.....	24	21	8,636	29	33	29	5,832	19	57	50	15,716	52
1893.....	34	28	9,197	29	46	38	13,770	44	41	34	8,661	27

As shown by the total columns, during the years from 1878 to 1891 24 per cent of the strikers, or persons involved in strikes, succeeded in gaining the object for which they struck, 47 per cent succeeded partly, while 29 per cent failed. In 1892 29 per cent succeeded, 19 per cent succeeded partly, and 52 per cent failed, while in 1893 29 per cent succeeded, 44 per cent succeeded partly, and 27 per cent failed. The

results of strikes for any of the causes shown may be found in the same manner by reference to the table.

The classification of strikes, for 1892 and 1893, according to the industries in which strikers were engaged is shown in the following table:

STRIKES, BY INDUSTRIES, 1892 AND 1893.

Industry.	1892.			1893.		
	Strikes.		Strikers.	Strikes.		Strikers.
	Total.	Report- ing num- ber of strikers.		Total.	Report- ing num- ber of strikers.	
Weavers, spinners, and carders.....	41	41	7,679	44	44	14,061
Miners and ore diggers	19	19	8,280	19	18	3,840
Mechanics.....	3	3	568	5	5	415
Founders	1	1	70	2	2	390
Day laborers.....	13	12	2,026	9	9	3,960
Masons and stonecutters	5	5	1,940	6	4	380
Kiln and furnace tenders.....	6	6	439	2	2	250
Printers	5	5	345	1	1	10
Hat makers	3	3	306	1	1	32
Tanners	1	1	12	6	6	447
Joiners	3	3	500			
Omnibus drivers and conductors.....	3	3	2,470	5	5	3,627
Cart drivers	1	1	60	4	3	220
Porters and coal carriers	4	4	2,610	7	7	1,300
Other industries	11	10	3,495	20	20	3,177
Total	119	117	30,800	131	127	32,109

The textile, mineral, and metallurgic industries, and that of public works, in which most of the common labor is engaged, are more largely represented in strikes because in those industries the workmen are more generally organized.

Immediately following is shown, for a series of years, from 1879 to 1893, the total and average days lost by reason of strikes.

DAYS OF WORK LOST BY REASON OF STRIKES, 1879 TO 1893.

Year.	Strikes.		Days of work lost.		Year.	Strikes.		Days of work lost.	
	Total.	Report- ing number of days lost.	Total.	Aver- age per strike.		Total.	Report- ing number of days lost.	Total.	Aver- age per strike.
1879	32	28	21,896	782	1887	69	66	218,612	3,312
1880	27	26	91,899	3,535	1888	101	95	191,204	2,013
1881	44	38	95,578	2,515	1889	126	123	215,880	1,755
1882	47	45	25,119	558	1890	139	129	167,657	1,300
1883	73	65	111,697	1,718	1891	132	123	258,059	2,098
1884	81	78	149,215	1,913	1892	119	114	216,907	1,903
1885	89	82	244,393	2,980	1893	131	122	234,323	1,921
1886	96	95	56,772	598					

STRIKES IN AUSTRIA IN RECENT YEARS.

Volume XI of the Foreign Reports of the British Royal Commission on Labor gives the leading facts in regard to strikes in Austria during 1891 and 1892, quoting from Zusammenstellungen der in den Jahren 1891 und 1892 stattgefundenen Arbeitseinstellungen im Gewerbebetriebe, Vienna, 1892 and 1893.

The two tables immediately following are summaries of strikes by industries for the years 1891 and 1892, respectively. They show the number of strikes, establishments involved, total employees in such establishments, employees striking, and total days of work lost by strikes. These two tables show also the causes or objects for which the strikes were undertaken, classifying them under three heads, viz: For increase of wages or that and other demands, against reduction of wages, and all other. The number of strikes which succeeded, succeeded partly, and failed is also shown:

STRIKES IN 1891, BY INDUSTRIES.

[It will be observed that the addition of the items in this table will not in all cases produce the totals given. The figures, however, are all as given in the report before referred to, the original not being accessible.]

Industry.	Strikes.	Employees.				Cause or object.			Result.		
		Estab-lish-ments.	Total.	Strik-ers.	Days lost.	For in-crease of wages or that and other de-mands.	Against reduc-tion of wages.	All other.	Suc-ceeded.	Suc-ceeded partly.	Failed.
Bakers.....	7	444	3,068	972	<i>a</i> 21,855	7	.....	.....	.....	3	4
Builders.....	7	55	2,288	1,392	5,231	5	.....	2	1	3	1
Brewers.....	1	1	17	17	17	.....	.....	1	.....	.....	1
Bookbinders....	2	40	107	79	766	2	.....	.....	.....	2	.....
Printers, engrav-ers, and type founders.....	7	95	3,250	2,236	<i>a</i> 75,251	3	.....	4	2	.....	5
Cement manu-facturers.....	1	1	20	20	24	.....	.....	1	1	.....	.....
Railway con-tractors.....	2	2	265	155	155	2	.....	.....	2	.....	.....
Glass and china manufacturers	11	457	6,313	698	4,353	7	2	2	2	2	7
Glovers.....	1	1	8	6	12	.....	.....	1	.....	.....	1
Military outfit-ers.....	1	1	140	32	64	1	.....	.....	.....	.....	1
Manufacturers of wooden goods..	2	2	86	34	658	.....	.....	2	1	.....	1
Hatters.....	1	1	9	5	5	.....	.....	1	.....	.....	1
Cork manufac-turers.....	1	1	10	7	.....	1	.....	.....	.....	1	.....
Leather manu-facturers.....	4	4	401	126	249	.....	1	3	1	.....	3
Hackney coach-men.....	1	50	148	148	148	.....	.....	1	.....	.....	1
Metal workmen.	12	13	2,447	1,338	12,911	5	.....	7	4	1	7
Paper and cellu-lose manufac-turers.....	3	13	852	104	542	1	2	.....	.....	.....	3

a About.

STRIKES IN 1891, BY INDUSTRIES—Concluded.

[It will be observed that the addition of the items in this table will not in all cases produce the totals given. The figures, however, are all as given in the report before referred to, the original not being accessible.]

Industry.	Strikes.	Estab- lish- ments.	Employees.			Cause or object.			Result.		
			Total.	Strik- ers.	Days lost.	For in- crease of wages or that and other de- mands.	Against reduc- tion of wages.	All other.	Suc- ceeded.	Suc- ceeded partly.	Failed.
Pipe manufac- turers.....	1	1	8	8	64	.....	1	.....	1	.....	.....
Brush makers...	1	1	17	3	27	1	.....	.....	.....	.....	1
Shipping.....	1	1	100	100	300	.....	1	.....	.....	.....	1
Dockers.....	1	1	800	30	90	1	.....	.....	.....	.....	1
Manufacturers of fancy boxes....	1	1	35	35	490	1	.....	.....	1	.....	.....
Tailors.....	1	79	1, 656	492	3, 444	1	.....	.....	.....	1	.....
River conserva- tors.....	1	1	72	72	720	1	.....	.....	.....	1	.....
Shoemakers.....	8	556	10, 846	2, 547	a 87, 363	4	3	1	1	4	3
Textile manufac- turers.....	18	18	6, 585	2, 929	26, 529	10	4	4	4	6	8
Joiners and cabi- netmakers.....	6	70	401	300	4, 678	2	.....	4	2	2	2
Sugar refiners...	1	1	537	130	1, 170	.....	1	.....	.....	.....	1
Total.....	104	b 1, 916	40, 486	b 14, 025	b 247, 076	55	15	34	23	26	b 51

a About.

b See prefatory note to table.

STRIKES IN 1892, BY INDUSTRIES.

[It will be observed that the addition of the items in this table will not in all cases produce the totals given. The figures, however, are all as given in the report before referred to, the original not being accessible.]

Industry.	Strikes.	Estab- lish- ments.	Employees.			Cause or object.			Result.		
			Total.	Strik- ers.	Days lost.	For in- crease of wages or that and other de- mands.	Against reduc- tion of wages.	All other.	Suc- ceeded.	Suc- ceeded partly.	Failed.
Painters.....	1	1	9	9	9	.....	.....	1	.....	.....	1
Builders.....	6	34	2, 241	2, 049	19, 401	5	1	.....	2	2	2
Binders.....	4	6	749	158	1, 548	2	.....	2	2	.....	2
Manufacturers of cardboard goods.	1	2	111	111	222	.....	.....	1	1	.....	.....
Manufacturers of cellular linen clothing and mil- itary stocks....	1	1	14	14	140	.....	.....	1	.....	.....	1
Turners.....	4	92	1, 250	442	13, 941	3	.....	1	2	2	.....
Innkeepers.....	1	1	4	4	4	1	.....	.....	.....	.....	1
Glass and china manufacturers ..	5	64	2, 341	2, 222	62, 609	3	1	1	1	2	2
Coffee sorters....	1	1	200	200	400	1	.....	.....	.....	.....	1
Leather manufac- turers.....	1	1	180	8	8	.....	.....	1	.....	1	1
Hackney coachmen	1	1, 200	1, 200	1, 200	2, 400	1	.....	.....	.....	1	.....
Malt manufac- ers.....	1	1	65	42	42	.....	.....	1	.....	.....	.....
Metal workers....	15	16	4, 415	1, 444	12, 607	4	4	7	2	5	8
Millers.....	2	2	22	13	25	1	.....	1	.....	.....	2
Pipe makers.....	1	1	18	11	22	1	.....	.....	1	.....	.....
Compositors.....	1	1	4	1	4	.....	.....	1	.....	.....	1
Shoemakers.....	5	5	363	238	1, 756	.....	5	.....	2	2	1
Trunk makers.....	1	1	19	10	60	.....	.....	.....	.....	.....	1
Textile manufac- turers.....	39	48	10, 515	5, 420	33, 114	17	8	14	10	12	17
Joiners and cabi- netmakers.....	4	24	206	206	1, 607	3	.....	1	2	.....	2

STRIKES IN 1892, BY INDUSTRIES—Concluded.

[It will be observed that the addition of the items in this table will not in all cases produce the totals given. The figures, however, are all as given in the report before referred to, the original not being accessible.]

Industry.	Strikes.	Estab-lish-ments.	Employees.			Cause or object.			Result.		
			Total.	Strik-ers.	Days lost.	For in-crease of wages or that and other de-mands.	Against reduc-tion of wages.	All other.	Suc-ceeded.	Suc-ceeded partly.	Failed.
Wheelwrights.....	1	12	30	20	460	.....	.....	1	.....	1	.....
Manufacturers of underlinen	3	3	509	123	533	2	1	.....	.....	1	2
Water company ..	1	1	86	66	66	1	.....	.....	.....	.....	1
Match manufac-turers	1	1	70	14	14	.....	1	.....	1	.....	.....
Total.....	101	1,519	24,621	14,025	150,992	a 46	21	34	26	29	46

a See prefatory note to table.

The following table shows the distribution of strikes in Austria in 1891 and 1892 by districts, giving the number of strikes, establishments involved, employees, and strikers:

STRIKES IN 1891 AND 1892, BY DISTRICTS.

[It will be observed that the addition of the items in this table will not in all cases produce the totals given. The figures, however, are all as given in the report before referred to, the original not being accessible.]

District.	Strikes.		Establishments.		Employees.		Strikers.	
	1891.	1892.	1891.	1892.	1891.	1892.	1891.	1892.
Lower Austria.....	35	28	22	1,336	17,111	7,285	5,875	2,520
Upper Austria.....	3	1	3	1	60	4	59	4
Salzburg .....	.....	1	.....	4	.....	19	.....	19
Styria	2	3	2	3	476	18	474	16
Carinthia.....	2	.....	2	.....	80	.....	36	.....
Carniola	2	2	2	2	641	410	124	260
Coast lands	1	3	1	9	800	1,270	30	1,270
Tyrol and Vorarlberg.....	4	1	68	1	440	46	275	44
Bohemia.....	27	35	599	127	16,852	10,740	5,023	8,004
Moravia	24	24	26	24	4,737	4,645	1,892	1,855
Silesia .....	.....	1	.....	1	.....	66	.....	22
Galicia	3	2	90	11	255	118	227	109
Bukowina	1	.....	1	.....	34	.....	10	.....
Dalmatia .....	.....	.....	.....	.....	.....	.....	.....	.....
Total	104	101	a 1,916	1,519	a 40,486	24,621	14,025	14,123

a See prefatory note to table.

PRIVATE AND PUBLIC DEBT IN THE UNITED STATES.

BY GEORGE K. HOLMES.

There is an elaborate network of debts and credits associated with production and trade, and growing out of the numerous wants and necessities of men, to satisfy which they in many cases use borrowed or hired wealth. The manufacturer may have a mortgage on his factory and be in debt for materials, the jobber and wholesale merchant are indebted to him, while the retail merchants owe them. The retail merchants have customers who are indebted to them, and these customers are more or less creditors. It is therefore practically impossible to ascertain the true amount of the private debts of the people. The difficulty can be illustrated by the following familiar example: A owes B \$10, B owes C \$10, and C owes A the same amount; a ten-dollar bill handed by the first to the second, by the second to the third, and by the third to the first will satisfy the three debts, yet in any statistics of private debt under this illustration the total would be \$30.

In undertaking to arrive at the amount of private debt it is impossible to offset credits against debts in cases similar to the foregoing. The best that can be done is to ascertain the amounts of the various classes of debts which are offset little, if any, by credits and regard their sum as the minimum amount of debt, somewhere above which is the true amount.

The results of an effort to do this are presented in the accompanying statement of the minimum debt of the United States in 1890. The amounts of the funded and unfunded debt of railroad and street railway companies, and the amount of the funded debt of telephone companies are obtained from the reports of the Eleventh Census of the United States. To the reported debt of railroad companies has been added an estimate of the debt not reported. The totals for the other items in the statement have been taken from similar official or authentic reports (*a*), or are carefully prepared estimates.

a Bulletins and final reports of the Eleventh Census, Poor's Manual of Railroads, the Manual of American Waterworks, reports of the Massachusetts gas and electric light commissioners, and reports of the Comptroller of the Currency.

MINIMUM DEBT OF THE UNITED STATES, 1890.

Description of debt.	Amount.	Per cent of group total.
RAILROAD COMPANIES.		
Funded debt reported.....	\$4,631,473,184	.....
Funded debt not reported (estimated in proportion to mileage).....	286,218,553	.....
Unfunded debt reported, not including unpaid dividends.....	707,986,820	.....
Unfunded debt not reported (estimated in proportion to mileage).....	43,752,557	.....
Total	5,669,431,114	.....
STREET RAILWAY COMPANIES.		
Funded debt.....	151,872,289	.....
Unfunded debt.....	30,368,465	.....
Total	182,240,754	.....
Total for railroads and street railway companies	5,851,671,868	.....
QUASI PUBLIC CORPORATIONS.		
Railroad companies (\$329,971,110 estimated)	5,669,431,114	91.44
Street railway companies.....	182,240,754	2.94
Telephone companies, funded debt.....	4,992,565	.08
Telegraph companies (\$2,556,808 estimated).....	20,000,000	.32
Public water companies, not owned by municipalities (\$26,488,939 estimated).....	89,127,489	1.44
Gas companies (estimated).....	75,000,000	1.21
Electric lighting and power companies (estimated).....	45,000,000	.73
Transportation companies, not otherwise specified, and canal, turnpike, bridge, and other quasi public corporations (estimated to make round total).....	114,208,078	1.84
Total	6,200,000,000	100.00
REAL ESTATE MORTGAGES.		
<i>On homes occupied by owners.</i>		
In the 420 cities and towns of from 8,000 to 100,000 population.....	292,611,974	27.95
In the 28 cities of 100,000 population and over	393,029,833	37.54
Outside of cities and towns of 8,000 population and over.....	361,311,796	34.51
Total	1,046,953,603	100.00
<i>On farms and homes occupied by owners.</i>		
On farms.....	1,085,995,960	50.92
On homes	1,046,953,603	49.08
Total	2,132,949,563	100.00
<i>On acre tracts.</i>		
On farms occupied by owners.....	1,085,995,960	49.16
On hired farms and other acre tracts.....	1,123,152,471	50.84
Total	2,209,148,431	100.00
<i>On lots.</i>		
On homes occupied by owners	1,046,953,603	27.48
On hired homes, business real estate, and all other lots.....	2,763,577,951	72.52
Total	3,810,531,554	100.00
<i>On all real estate.</i>		
On acre tracts	2,209,148,431	36.70
On lots.....	3,810,531,554	63.30
Total	6,019,679,985	100.00
INDIVIDUALS AND PRIVATE CORPORATIONS.		
Real estate mortgages.....	6,019,679,985	50.16
Crop liens in the South (estimated).....	300,000,000	2.50
Crop liens outside of the South, and chattel mortgages (estimated).....	350,000,000	2.92
National banks, loans and overdrafts.....	1,904,167,351	15.87
Other banks, loans and overdrafts, not including real estate mortgages....	1,172,918,415	9.77
National, state, and local taxes.....	1,040,473,013	8.67
Other net private debt (estimated to make round total).....	1,212,761,236	10.11
Total	12,000,000,000	100.00

MINIMUM DEBT OF THE UNITED STATES, 1890—Concluded.

Description of debt.	Amount.	Per cent of group total.
AGGREGATE PRIVATE DEBT.		
Quasi public corporations	\$6, 200, 000, 000	34. 07
Individuals and private corporations.....	12, 000, 000, 000	65. 93
Total	18, 200, 000, 000	100. 00
PUBLIC DEBT, LESS SINKING FUND.		
United States.....	891, 960, 104	44. 00
States.....	228, 997, 389	11 30
Counties.....	145, 048, 045	7. 15
Municipalities.....	724, 463, 060	35. 74
School districts.....	36, 701, 948	1. 81
Total	2, 027, 170, 546	100. 00
AGGREGATE PRIVATE AND PUBLIC DEBT.		
Private debt.....	18, 200, 000, 000	89. 98
Public debt.....	2, 027, 170, 546	10. 02
Total	20, 227, 170, 546	100. 00

Some of the classes of corporations enumerated in the foregoing statement, such as transportation companies not otherwise specified, canal, turnpike, and bridge companies, do a cash business, and others a business that is so nearly for cash that there is comparatively little in amount of credits to offset against their debt. The amount of credits of such corporations is undoubtedly much more than balanced by the wages that they owe just before pay day.

Debtors who place mortgages on their real or personal estates are creditors to some extent, how far it is impossible to estimate; but these persons are not regarded as appreciably a creditor class, as they would need to be if their combined debt of \$6,669,679,985 was to be reduced much on this account. On the other hand, the borrowers from banks, not including borrowers on real estate security, may be supposed to be creditors to a considerable degree. National banks can not lend on real estate mortgages, and therefore these securities are excluded from the loans of other banks.

The public revenue, too, is derived from persons who are creditors as well as debtors, and a large portion of it, as in the case of crop liens, is not a debt that continues throughout the whole year. Notwithstanding this, it is included in the statement of debt, partly because it is a conspicuous and disagreeable debt burden and partly to account for some of the debt which can not be ascertained in its entirety.

It is believed that the total of the preceding statement expresses the minimum debt of the people of the United States in 1890. Only 12.14 per cent of it is estimated, no part of it is duplicated, and the supposition is that the accepted debt offset by credit is more than equaled by the omitted debt. In addition to showing the amounts, the statement gives the percentages that the different amounts are of the totals of the respective groups of debts. For instance, of the grand total, 89.98 per

cent is classed as private and 10.02 per cent as public debt; the real-estate mortgage debt forms 50.16 per cent of the total debt of individuals and private corporations, and the debt of railroad companies 91.44 per cent of the debt of quasi public corporations.

The relative importance of the different classes of debts is shown by the following statement, in which the various items of debt are converted into percentages of the total debt of \$20,227,170,546:

PER CENT OF EACH CLASS OF DEBT OF THE AGGREGATE DEBT, 1890.

Description of debt.	Per cent.
QUASI PUBLIC CORPORATIONS.	
Railroad companies (partly estimated).....	28.03
Street railway companies.....	.90
Telephone companies, funded debt.....	.03
Telegraph companies (partly estimated).....	.10
Public water companies, not owned by municipalities (partly estimated).....	.44
Gas companies (estimated).....	.37
Electric lighting and power companies (estimated).....	.22
Transportation companies, not otherwise specified, and canal, turnpike, bridge, and other quasi public corporations (estimated).....	.50
Total.....	30.65
INDIVIDUALS AND PRIVATE CORPORATIONS.	
Real estate mortgages.....	29.76
Crop liens in the South (estimated).....	1.48
Crop liens outside of the South, and chattel mortgages (estimated).....	1.73
National banks, loans and overdrafts.....	9.41
Other banks, loans and overdrafts, not including real estate mortgages.....	5.80
National, state, and local taxes.....	5.15
Other net private debt (estimated).....	6.00
Total.....	59.33
PUBLIC DEBT, LESS SINKING FUND.	
United States.....	4.41
States.....	1.13
Counties.....	.72
Municipalities.....	3.58
School districts.....	.18
Total.....	10.02
Grand total.....	100.00
Estimated.....	12.14
Statistically established.....	87.86

Of the different groups of debts that of individuals and private corporations stands first, forming 59.33 per cent of the total, while quasi public corporations form 30.65 per cent. The real-estate mortgage debt alone is 29.76 per cent of the grand total, and is followed by that of railroad companies, 28.03 per cent. Among the items of public debt that of the United States is first, and forms 4.41 per cent, while the debt of municipalities is 3.58 per cent of the total.

There is a great difference between the significance of a debt incurred to acquire the ownership of capital or the more durable property to be used productively and to be retained and used by the debtor and to be kept available for the payment on his debt, and that of a debt incurred for the purchase of property soon to be consumed unproductively or for the purchase of evanescent property. The debt of the quasi public corporations originally stood for substantially an equal amount of capital, and it stands for the same at the present time, except in the

cases of such corporations (almost entirely railroad companies) as have become bankrupt to such a degree that their property is not sufficient to pay their debts.

The statistical information concerning the purposes for which private debts were incurred is exceedingly limited, except that represented by real estate mortgages or by incumbrances on farms and homes occupied by owners, which formed the subject of special investigations at the eleventh census of the United States. The purposes for which this class of debts were incurred are condensed to eight groups, and presented in the accompanying statement. This statement not only gives the amount of the debt incurred for the different purposes, but shows the per cent that each item is of the respective totals of the three general groups of debts based on farms occupied by owners, on homes occupied by owners, and the combination, on farms and homes occupied by owners.

PURPOSES OF INCUMBRANCES ON FARMS AND HOMES.

[The debts included under this classification consist almost entirely of real estate mortgages.]

Purposes of debt.	Amount.	Per cent of group total.
ON FARMS OCCUPIED BY OWNERS.		
Debt incurred for—		
Purchase of real estate.....	\$699, 176, 464	64. 38
Real estate improvements.....	49, 168, 733	4. 53
Real estate purchase and improvements combined (not included in the two items next preceding).....	57, 689, 492	5. 31
Business	21, 139, 559	1. 95
Purchase of the more durable kinds of personal property.....	12, 904, 822	1. 19
Farm and family expenses	30, 684, 018	2. 82
Various combinations of purposes, not otherwise specified.....	184, 840, 230	17. 02
All other purposes	30, 392, 642	2. 80
Total	1, 085, 995, 960	100. 00
ON HOMES OCCUPIED BY OWNERS.		
Debt incurred for—		
Purchase of real estate.....	554, 334, 083	52. 95
Real estate improvements.....	229, 412, 937	21. 91
Real estate purchase and improvements combined (not included in the two items next preceding).....	66, 793, 837	6. 38
Business	84, 715, 323	8. 09
Purchase of the more durable kinds of personal property.....	2, 037, 624	. 19
Family expenses	18, 589, 629	1. 78
Various combinations of purposes, not otherwise specified.....	64, 706, 846	6. 18
All other purposes	26, 363, 324	2. 52
Total	1, 046, 953, 603	100. 00
ON FARMS AND HOMES OCCUPIED BY OWNERS.		
Debt incurred for—		
Purchase of real estate.....	1, 253, 510, 547	58. 77
Real estate improvements	278, 581, 670	13. 06
Real estate purchase and improvements combined (not included in the two items next preceding).....	124, 483, 329	5. 84
Business	105, 854, 882	4. 96
Purchase of the more durable kinds of personal property.....	14, 942, 446	. 70
Farm and family expenses	49, 273, 647	2. 31
Various combinations of purposes, not otherwise specified.....	249, 547, 076	11. 70
All other purposes	56, 755, 966	2. 66
Total	2, 132, 949, 563	100. 00

The purchase of real estate appears as the principal purpose for which debts were incurred, the total for this purpose, when not associated with any other, being 58.77 per cent of the combined debt on farms and homes occupied by owners. Real estate improvements, when not asso-

ciated with any other purpose, rank second, being 13.96 per cent of the combined debt. The details given in this statement show at a glance the different incentives for debt. By a further condensation of purposes, it appears that real estate purchase and improvements, when not associated with any other purpose, are represented by the following percentages: For farms, 74.22 per cent; for homes, 81.24 per cent; for farms and homes, 77.67 per cent. Real estate purchase and improvements, business, and the purchase of the more durable kinds of personal property are: For farms, 93.68 per cent; for homes, 95.56 per cent; for farms and homes, 94.65 per cent (*a*). Thus it appears that almost the entire incumbrance on farms and homes occupied by owners was due to the acquiring of capital and the more durable kinds of property.

The crop lien of the South was a necessity that grew out of the conditions in which the farmers found themselves at the close of the civil war. They had their farms and some mules and implements, but beyond that they were poor and could not maintain themselves, to say nothing of paying wages until the harvesting of the next crop, and the ex-slaves, perhaps hardly more than their former masters, were in need of immediate subsistence. In this strait, credit was obtained with the merchants for an advance of supplies until the harvesting of the crop, which, being mostly cotton, but partly tobacco, was as good as cash at the time of harvest. The plantations were next more or less subdivided into holdings to be cultivated by the negroes on shares. Landlords and tenants secured the merchants for advancements by crop liens and by mortgages on farm animals. That system has continued with little abatement until the present time, and the debt that accompanies it is mostly a subsistence debt, but to some extent a debt for capital. The crop liens and chattel mortgage debt of the more recently settled regions partake largely of the latter character.

The purposes of the loans obtained from banks can not be definitely described. It is a matter of common understanding that they are mostly for capital, since banks would not lend to persons, and friends would not indorse for them, if they intended to use the borrowed money so as to weaken their financial responsibility.

The tax debt aims to have for its compensation the maintenance of justice, the promotion of public works, of education, and of undertakings for the general good; and the same may be said of the public debt.

The miscellaneous undescribed debts are those that grow out of trade, production, and services of many varieties. It is impossible to say how far they stand for capital, or for wealth to be preserved or to be consumed.

After the foregoing review of the significance of the various classes of debt, it is apparent that at least about nine-tenths of it was incurred for the acquirement of capital and of the more durable kinds of prop-

a These per cents do not appear in the statement, as they are partly composed of incumbrance taken from some of the "various combinations of purposes, not otherwise specified."

erty, leaving not more than one-tenth, and, as the purposes of the incumbrances on farms and homes indicate, very likely much less than one-tenth, as a consumption debt, or for debt necessitated by misfortune.

Not only is the repayment of the debt obligatory upon the debtor, but he commonly agrees to pay interest upon the loan at a certain rate. Upon the source from which he derives the wealth with which to pay interest depends the degree of "burden," if any, that it is to him. There is a difference to him whether the source is the earnings of the borrowed wealth used as capital, or the earnings of his labor, or the principal of the borrowed wealth itself. The complaint of many of the Western and Southern farmers for several years past has been that they paid interest, if at all, out of the earnings of their labor, if not out of their capital. As already shown, by far the principal portion of the debt of individuals and of private and quasi public corporations represents productive capital in their hands.

Statistics of rates of interest now available make it possible to compute, approximately, the amount of the interest paid on the public and private debt in 1890. This has been done, and the results are presented in the following statement, which shows the debt and the amount and rate of interest for the different classes of debt:

AMOUNT AND RATE OF INTEREST, 1890.

Description of debt.	Debt.	Interest.	Rate per cent.
PRIVATE DEBT.			
Railroad companies, funded debt (partly estimated)	\$4, 917, 691, 737	<i>a</i> \$221, 499, 702	4. 50
Street railway companies, funded debt.....	151, 872, 289	8, 945, 278	<i>b</i> 5. 89
Telephone companies, funded debt.....	4, 992, 565	294, 062	<i>b</i> 5. 89
Telegraph companies (partly estimated)	20, 000, 000	1, 178, 000	<i>b</i> 5. 89
Public water companies, not owned by municipalities (partly estimated)	89, 127, 489	5, 249, 609	5. 89
Gas companies (estimated)	75, 000, 000	4, 417, 500	<i>b</i> 5. 89
Electric lighting and power companies (estimated)	45, 000, 000	2, 650, 500	<i>b</i> 5. 89
Transportation companies, not otherwise specified, and canal, turnpike, bridge, and other quasi public corporations (estimated)	114, 208, 078	6, 726, 856	<i>b</i> 5. 89
Real estate mortgages.....	6, 019, 679, 985	397, 442, 792	6. 60
Crop liens in the South (estimated).....	300, 000, 000	120, 000, 000	<i>c</i> 40. 00
Crop liens outside the South, and chattel mortgages (estimated)	350, 000, 000	35, 000, 000	<i>c</i> 10. 00
National banks, loans and overdrafts.....	1, 904, 167, 351	125, 675, 045	<i>d</i> 6. 60
Other banks, loans and overdrafts, not including real estate mortgages.....	1, 172, 918, 415	77, 412, 615	<i>d</i> 6. 60
Three-fourths of other net private debt (estimated) (<i>c</i>).....	909, 570, 927	65, 069, 965	<i>c</i> 7. 00
Total.....	16, 074, 228, 836	1, 071, 561, 924	6. 67
PUBLIC DEBT.			
United States	891, 960, 104	28, 997, 603	4. 08
States	1, 135, 210, 442	65, 541, 776	5. 29
Counties.....			
Municipalities			
School districts.....	2, 027, 170, 546	94, 539, 379	4. 85
Total			
PRIVATE AND PUBLIC DEBT.			
Private debt.....	16, 074, 228, 836	1, 071, 561, 924	6. 67
Public debt.....	2, 027, 170, 546	94, 539, 379	4. 85
Total	18, 101, 399, 382	1, 166, 101, 303	6. 44

a Actually paid and not including interest due and unpaid.

b The rate for water companies is adopted.

c Arbitrarily adopted.

d The rate for real estate mortgages is adopted.

AMOUNT AND RATE OF INTEREST, 1890—Concluded.

Description of debt.	Debt.	Interest.	Rate per cent.
REAL ESTATE MORTGAGES.			
On farms occupied by owners.....	\$1, 085, 995, 960	\$76, 728, 077	7. 07
On homes occupied by owners.....	1, 046, 953, 603	65, 182, 029	6. 23
On farms and homes occupied by owners.....	2, 132, 949, 563	141, 910, 106	6. 65
On homes occupied by owners in the 420 cities and towns of from 8,000 to 100,000 population	292, 611, 974	18, 417, 745	6. 29
On homes occupied by owners in the 28 cities of 100,000 popu- lation and over.....	393, 029, 833	22, 584, 509	5. 75
On homes occupied by owners outside of cities and towns of 8,000 population and over.....	361, 311, 796	24, 179, 775	6. 69
On acre tracts.....	2, 209, 148, 431	162, 652, 944	7. 36
On lots	3, 810, 531, 554	234, 789, 848	6. 16
On all real estate.....	6, 019, 679, 985	397, 442, 792	6. 60

The interest on real estate mortgages is given at 6.60 per cent, which is the rate adopted for the loans of all banks. On the crop liens of the South a high average rate is paid, how high it is not known. Numerous and extensive inquiries, many of them answered by merchants and cotton buyers who hold or have held crop liens, point to the conclusion that the average rate on these liens must be as high as 40 per cent, rarely going as low as 25 per cent, and often going as high as 75 per cent and more.

From the report of the bureau of labor statistics of Illinois it appears that the average rate of interest on chattel mortgages in that state was 7.83 per cent in 1887. There is reason to believe that the rate on chattel mortgages farther west and in the South, and the crop liens west of the Mississippi River, is higher than this, and the general rate of 10 per cent is adopted for crop liens outside of the South and for chattel mortgages.

Some of the estimated "other net private debt," which has been placed at \$1,212,761,236, does not bear interest, such as the debt owing to physicians, to lawyers, for labor, and the like, and for the want of any knowledge of its proportions its amount is arbitrarily assumed to be one-fourth of the total of the class to which it belongs, and the average rate of interest on the remaining three-fourths to be 7 per cent.

The average rates of interest on the total public debt, the debt of the United States, and the local public debt are taken from the report on wealth, debt, and taxation, which forms a part of the report of the eleventh census of the United States. No attempt has been made to correct any of these rates according as the bonds of corporations, public as well as private and quasi public, have been sold above or below par, nor according as there has been default of payment, except in the latter case, for railroad companies.

The total interest-bearing private debt is \$16,074,228,836, and the total interest paid \$1,071,561,924, the average rate being 6.67 per cent, while the average rate on the debt of the United States is 4.08 per

cent, this low rate being partly determined by the debt's freedom from taxation. While the average rate on real estate mortgages is 6.60 per cent, it goes as high as 7.07 per cent on farms occupied by owners and 7.36 per cent on acre tracts.

The material is not statistically or otherwise ascertainable to determine with what ease or difficulty, as the case may be, debtors pay their debts and the interest on them. Numerous voluntary explanations bearing on this point have been made by mortgage debtors and by debtors who own their farms and homes subject to incumbrance. From these explanations it would be impossible to form any definite or tangible conclusion; they are too often doubtful, because remote and involved in political and economic theories.

Whether a ratio between the debt and the wealth possessed by the debtors indicates more than the debt's security to the creditors depends upon the earnings of the borrowed wealth, or, if it has no earnings, upon the income of the debtors.

Subject to these qualifications the accompanying statement is presented, which gives the amount of debt, the wealth, and the percentage that the debt is of the wealth. The figures given in the column headed wealth represent in some cases only the value of the property on which the debt given is a lien; in other cases they represent the value of all of the property in the class to which the debt belongs, although some of the property is not incumbered. These latter are railroad, street railway, and telephone companies, the gas companies in Massachusetts first mentioned, and taxed real estate and untaxed mines.

PER CENT OF DEBT OF WEALTH, 1890.

Description of wealth.	Debt.	Wealth.	Per cent debt is of wealth.
Railroad companies	\$5, 669, 431, 114	\$8, 401, 508, 804	67. 48
Street railway companies.....	182, 240, 754	283, 898, 519	64. 19
Telephone companies	4, 992, 565	72, 341, 736	69. 01
Gas companies in Massachusetts (<i>a</i>).....	6, 892, 329	<i>b</i> 20, 322, 329	33. 92
Gas companies in Massachusetts owing debt (<i>a</i>)	6, 892, 329	<i>b</i> 14, 475, 229	47. 61
Incumbered farms occupied by owners.....	1, 085, 995, 960	3, 054, 923, 165	35. 55
Incumbered homes occupied by owners.....	1, 046, 953, 603	2, 632, 374, 904	39. 77
Incumbered farms and homes occupied by owners.....	2, 132, 949, 563	5, 687, 298, 069	37. 50
Incumbered homes occupied by owners in the 420 cities and towns of from 8,000 to 100,000 population	292, 611, 974	739, 846, 087	39. 55
Incumbered homes occupied by owners in the 28 cities of 100,000 population and over.....	393, 029, 833	934, 191, 811	42. 07
Incumbered homes occupied by owners outside of cities and towns of 8,000 population and over.....	361, 311, 796	958, 337, 006	37. 70
Taxed real estate and untaxed mines.....	6, 019, 679, 985	36, 025, 071, 490	16. 71
The United States.....	20, 227, 170, 546	65, 037, 091, 197	31. 10

a 1891.

b Capital stock and bonds.

The percentage that the debt is of the wealth with which it is compared ranges from 16.71 per cent for the taxed real estate and untaxed mines to 69.01 per cent for telephone companies. The percentage in the case of incumbered farms or homes occupied by owners ranges from 35.55 per cent on farms to 42.07 on homes in the 28 cities with a

population of 100,000 and over, the percentage of incumbrance being less on farms than on homes. The percentage on homes is highest in the cities with a population of 100,000 and over, falls to 39.55 per cent in the cities with a population of from 8,000 to 100,000, and to the lowest point, 37.70 per cent, on those homes that are outside the cities of 8,000 population and over, the percentage of incumbrance being considerably less in the rural than in the urban districts. The total private and public debt is 31.10 per cent of the wealth of the United States; this percentage measures as a minimum the extent to which the wealth of the country has passed into the possession of debtors.

The comparison between debt and wealth is continued in the next statement, which exhibits the values of various annual products and classes of property. This statement is necessarily more or less imperfect as a comparison, but it contains amounts of which it may be desired to make some use in connection with the subject under consideration.

DEBT AND ITS INTEREST COMPARED WITH VALUES, 1890.

Description.	Amount.
Private and public debt	\$20, 227, 170, 546
Interest paid on the private and public debt	1, 166, 101, 303
Product of manufactories, less cost of materials	4, 211, 239, 271
Product of farms	2, 460, 107, 454
Product of fisheries	44, 277, 514
Product of mines and quarries	587, 230, 662
Total products of productive industries	7, 302, 854, 901
Capital employed in manufacturing	6, 139, 397, 785
Value of farms	13, 279, 252, 649
Value of live stock on farms and ranges, farm implements, and machines	2, 703, 015, 040
Capital employed in the fisheries	43, 602, 123
Value of mines and quarries and products on hand	1, 291, 291, 579
Total capital invested in productive industries	23, 456, 559, 176
Value of farms, live stock on farms and ranges, farm implements, and machines	15, 982, 267, 689
Wages and salaries paid in manufacturing	2, 283, 216, 529
Value of machinery and mills and products on hand, raw and manufactured	3, 058, 593, 441
Value of telegraph and telephone property, shipping, and canals	701, 755, 712
Value of gold and silver coin and bullion	1, 158, 774, 948
Income of railroad companies	1, 204, 335, 951
Property insurance risks in force	18, 691, 434, 190
Increase of wealth, 1880 to 1890	21, 395, 091, 197
Increase of wealth, 1889 to 1890	2, 819, 902, 791

Per capita averages based on the number of debtors convey an idea of the general level of debt among them, but when the averages are based on the total population the idea conveyed must be that of the social level of debt. The per capita, or social level of debt, is shown in the following statement for some of the principal groups of debts:

PER CAPITA DEBT, 1890.

Description of debt.	Per capita debt.
Quasi public corporations:	
Railroad and street railway companies.....	\$93
Other quasi public corporations.....	6
Total.....	99
Individuals and private corporations:	
Real estate mortgages on incumbered farms, etc.....	34
Other real estate mortgages.....	62
Banks, loans and overdrafts, not including real estate mortgages.....	49
National, state, and local taxes.....	17
Other.....	30
Total.....	192
Total quasi public and private debt.....	291
Public debt.....	32
Total private and public debt.....	323
On incumbered farms and homes occupied by owners, crop liens, chattel mortgages, taxes, and "other net private debt".....	80

The per capita private debt is \$291, public debt \$32, the total being \$323, or \$1,594 per family. Few families owe this amount; and the foregoing analysis shows the sources of the debt that contributes to most of the averages. It comes largely from the capital of railroad and other quasi public corporations, from real estate purchases and improvements, and from the loans of banks.

If to the crop liens and chattel mortgages are added the taxes, "other net private debt," and the public debt, the total will include most of the debt to which debtors are most sensitive, although some of it is capital. The total of this group of debts is \$4,930,404,795, that is, \$79 per capita, or \$388 to each family of 4.93 persons in 1890.

The reports of the eleventh census supply some averages of debt computed upon the number of debtors. Each family owning the farm it occupies under incumbrance owes an average incumbrance of \$1,224; home, \$1,293; farm or home, \$1,257; home in the 420 cities and towns of from 8,000 to 100,000 population, \$1,363; home in the 28 cities of 100,000 population and over, \$2,337; home outside of the cities and towns of 8,000 population and over, \$846. The average mortgage on acre tracts made during the ten years from 1880 to 1889, inclusive, was for \$1,032; on lots, \$1,509; on all real estate, \$1,271; on lots in the 27 counties containing the 28 cities of 100,000 population and over, \$2,798; mortgages made by quasi public corporations are not included.

To what extent real estate may be mortgaged is a matter of opinion, depending in the aggregate upon the consensus of opinion of lenders as to the degree of risk they will take. The degree of risk varies as between city and country, as between improved and unimproved real estate, and as between one region and another. The real estate mortgage debt has reached \$6,019,679,985, and the estimated true value of taxed real estate and untaxed mines with which this amount may be compared is \$36,025,071,490. The taxed real estate and untaxed mines,

valued as above, constitute the real estate upon a part of which the above-mentioned mortgage debt is an incumbrance, and include little real estate of quasi public corporations.

If it is practically possible to mortgage real estate for one-half of its value and no more, the existing mortgage debt is 33.42 per cent of the limit; if for three-fifths of its value, 27.85 per cent of the limit; if for two-thirds, 25.06 per cent of the limit.

High real estate values make possible a large mortgage debt, and as a general rule where real estate values are highly concentrated the same is true of mortgage debt. Among the 2,781 counties covered by the census investigation of mortgages there are 27 that contain the 28 cities of 100,000 population and over, and the mortgage debt on the real estate in these counties is 40.51 per cent of the entire real estate mortgage debt of the whole country. In the 338 counties containing the 448 cities and towns of 8,000 population and over the mortgage debt is 69.40 per cent of the total. There are 29 counties in each of which the mortgage debt is \$25,000,000 and over, and the total mortgage debt on the real estate in these counties is 43.34 per cent of the total for the whole country. The 76 counties each having real estate with a mortgage debt of \$10,000,000 and over, represent 55.20 per cent of the total, and the 158 counties each having an existing mortgage debt of \$5,000,000 and over 64.71 per cent of the total.

RECENT REPORTS OF STATE BUREAUS OF LABOR STATISTICS.

In this number of the Bulletin a digest of the reports of the state bureaus of labor statistics in Connecticut, Indiana, Michigan, Minnesota, Missouri, and Wisconsin is given, and will be followed, in subsequent numbers, by similar presentations for the reports of the bureaus in other states. As far as possible quotations have been made from the results of the original investigations conducted by the different bureaus.

CONNECTICUT.

The Tenth Annual Report of the Bureau of Labor Statistics of Connecticut for the year ending November 30, 1894, is devoted to the following subjects: Savings and loan associations, 150 pages; effects of the industrial depression, 98 pages; child labor, 27 pages; effect of reduced working time on production, 30 pages; trade and industrial education, 70 pages. The presentation under each of these heads, with the exception of the last, is the result of an original investigation into conditions prevailing in Connecticut.

SAVINGS AND LOAN ASSOCIATIONS.—The general plan of operation of these associations, their origin, introduction, and growth in the United States, and their present importance is discussed. The development of the associations in Connecticut is given in detail, and the statistics for the sixteen local associations in existence during the year are summarized and presented separately. The draft of a proposed law to regulate these associations in the state is given in full, with the laws of several other states on the same subject.

Some of the leading facts shown for the operations of the sixteen associations in Connecticut during 1894 are summarized as follows:

SAVINGS AND LOAN ASSOCIATIONS, 1894.

Assets	\$790, 605. 02
Liabilities:	
Capital or share account.....	\$722, 440. 02
Other liabilities, including undivided profits.....	68, 165. 00
Total	790, 605. 02

Receipts:	
Cash on hand at beginning of year.....	\$44,605.76
Cash receipts in last fiscal year, exclusive of loans repaid.....	272,447.58
Loans repaid.....	101,993.99
Total	419,047.33
Disbursements:	
Real-estate loans.....	\$192,947.68
Withdrawals	134,043.95
Expense account.....	6,092.64
Other disbursements, including cash on hand.....	85,963.06
Total	419,047.33
Profits:	
Net (expense of management deducted).....	\$37,947.77
Gross profits.....	42,980.12
Number of loans to pay for homes.....	59
Number of loans for other purposes.....	157
Total number of loans.....	216
Loans repaid, number.....	1,078
Loans repaid, amount.....	\$364,015.18
Loans outstanding at end of last fiscal year.....	\$732,966.97
Number of shares outstanding at end of last fiscal year.....	20,493
Value of shares at maturity.....	\$4,108,850.00
Per cent management expenses are of receipts.....	1.97
Per cent borrowers are of shareholders.....	22.03
Per cent loans are of shareholders.....	28.37
Number of shareholders at end of last fiscal year, men.....	2,251
Number of shareholders at end of last fiscal year, women.....	568
Number of shareholders at end of last fiscal year, minors.....	169
Total number of shareholders.....	2,988

EFFECTS OF THE INDUSTRIAL DEPRESSION.—The statistics presented on this subject were obtained directly from the books of 378 leading establishments, representing the principal industries in different parts of the state and giving employment to 48.17 per cent of the total number of employees in all industries, according to the United States census of 1890. As 1892 was a fairly prosperous year it was requested that the number of employees, wages paid, and hours of labor for that year be used in comparison with similar data for each month of the period of depression extending from June, 1893, to August, 1894, inclusive. The number of days entirely shut down and changes in wage rates during the period of depression were also called for. The results are given in detail for each establishment, and summarized in convenient form for the different industries. The extent of the depression is indicated by a tabular statement showing the percentages that the time, number of employees, wages, etc., are of the totals for each establishment when working under the conditions existing in 1892. The summary for all industries shows that the working time during the period of depression was about two-thirds of the full time, and the average number of employees was 84.83 per cent of the average number in 1892, while the average monthly payment in wages had decreased about 25 per cent. A large majority of the industries retained on the pay rolls a large percentage of the ordinary number of employees. The reduction made necessary by the depression was largely in the working time, and this is reflected with the nearest approach to accuracy in the lessening of the payments on account of wages. Of the larger industries woolen goods manufacture

felt most keenly the effect of the depression, the monthly wage payments being reduced to 61.34 per cent of the average in 1892. The following is a reproduction of a portion of the summary table presenting these facts:

PERIOD OF DEPRESSION, FROM JUNE, 1893, TO AUGUST, 1894, COMPARED WITH
NORMAL CONDITION OF 1892.

Industry.	Per cent hours worked of full time.	Per cent average number employed of average number in 1892.	Per cent monthly average wages paid of monthly average in 1892.
Boots and shoes and leather goods.....	70. 86	86. 88	77. 34
Brass and brass goods.....	70. 19	84. 39	76. 27
Carriages and carriage parts.....	60. 25	79. 26	71. 29
Cutlery and tools.....	53. 10	85. 16	63. 87
Firearms.....	53. 05	59. 86	57. 46
Hardware.....	63. 96	80. 13	75. 75
Hats.....	79. 74	92. 42	78. 56
Hosiery and knit goods.....	70. 21	81. 20	74. 82
Machine shops.....	65. 77	82. 32	74. 10
Manufactures of cotton goods.....	65. 82	81. 03	83. 74
Musical instruments and parts.....	46. 66	59. 90	56. 25
Paper boxes and envelopes.....	78. 61	84. 18	82. 29
Paper mills.....	84. 88	95. 55	87. 28
Printing and bookbinding.....	89. 47	90. 21	97. 28
Rubber and elastic goods.....	82. 50	92. 31	80. 08
Silk.....	63. 59	92. 50	75. 42
Silver-plated ware.....	59. 67	86. 77	68. 95
Woodworking.....	70. 16	87. 50	74. 60
Woolen goods.....	57. 77	74. 56	61. 34

A little more than one-half of the establishments represented reduced the rate of wages. The most common percentage of reduction was 10. In several of the industries not over one-third of the establishments reported reductions in wage rates, and in one industry, that of printing and bookbinding, no changes in wage rates were reported. Changes in the wage rates, average employees and wages, time the establishments were idle, and the production during the depression as compared with 1892, together with percentages similar to those shown in the above statement, are given in detail in the report for each of the 378 establishments, grouped under the different industries.

CHILD LABOR.—To show the desirability of extending the age limit from 13 to 14 years at which children could leave school and seek employment, the bureau continued the investigation of the Connecticut board of education, referred to in the report of the secretary for 1892-93. Information was obtained from the grammar schools of the state as to the average age at which pupils completed the highest grammar grade, the per cent not completing the grammar school course, the per cent leaving school upon attaining their thirteenth year, and other data on the subject. Fifty-eight of the 74 schools reporting for 1894 stated that the average age at completion was more than 14 years. In the majority of schools reporting, the percentage of children who do not complete the grammar school course exceeded 50.

The replies to the question concerning the average age at completing the grammar school course are summarized as follows:

AGES AT COMPLETION OF GRAMMAR SCHOOL COURSE.

Average age at completion of highest grammar grade.	Schools reporting.				
	1890.	1891.	1892.	1893.	1894.
Over 12 and under 13 years.....			1		1
Over 13 and under 14 years.....	6	9	6	10	15
Over 14 and under 15 years.....	9	11	23	26	29
Over 15 years.....	11	16	17	22	29

In commenting on the results of child labor and educational laws in other states as compared with Connecticut the commissioner states: "There are employed in New York factories 15 children for each 1,000 employees, in Massachusetts 18 per 1,000, and in Connecticut 21 per 1,000." The calculations are based on the United States census of 1890. The beneficial results of extending the age limit are treated under the appropriate heads of "Strength of body and of character," "Greater skill and increased comforts," "Would not intensify competition," etc.

EFFECT OF REDUCED WORKING TIME ON PRODUCTION.—Information on this subject was obtained from about 100 establishments. The questions called for the effect of a decrease in working time on piece earnings and on production per employee. The answers are published in full for each establishment, by industries.

The following statement concerning establishments engaged in the manufacture of hats is illustrative of the data furnished for the different industries:

HAT-MAKING ESTABLISHMENTS CLOSING AT NOON ON SATURDAY.

Location of establishment.	Months closed at noon Saturday.	Plan adopted in—	Reduction in weekly wages.	Effect on piece earnings.	Effect on production per employee.	Usual number of employees.
Norwalk.....	12	1890	Yes.....	None ...	None (a).	200
Norwalk.....	12	1890	Yes.....	None ...	None ...	12
Norwalk.....	12	1890	Yes.....	None ...	None ...	100
Norwalk.....	12	1890	Yes.....	None ...	None ...	150
Norwalk.....	12	1891	Yes.....	None ...	None ...	60
Danbury	3	1891	(b)	None ...	None ...	10
Norwalk.....	12	1892	Yes.....	None ...	None ...	60
Danbury (c).....	12	.....	Yes.....	(d)	(d)	20

a Except where machinery is used.

b All piecework.

c Closing at 3 p. m. Saturday.

d Proportionately less.

More than one-half of the establishments making returns reported that there had been no reduction in production following a decrease in the working hours; 31 reported a reduction in product proportionate to the reduction in working time; 7 reported a slight reduction in product; 6 did not report whether the reduction was proportionate or otherwise. The conditions prevailing in the different industries, as shown by the

answers of each establishment, are discussed in detail. The statistical presentation is preceded by a general treatise on the subject under consideration.

TRADE AND INDUSTRIAL EDUCATION.—This subject is treated in textual form, and covers the methods prevailing in foreign countries and in various institutions in the United States, the data being gathered largely from the Eighth Annual Report of the Commissioner of Labor of the United States.

INDIANA.

The Fifth Biennial Report of the Department of Statistics of Indiana for the years 1893 and 1894 opens with a summary of the data concerning different industries and a reproduction of the labor laws of the state. The subjects discussed in the report are as follows: Women wage earners of Indianapolis, 108 pages; labor organizations, 57 pages; domestic labor, 57 pages; coal mining statistics, 123 pages; the iron industries, 35 pages; the wood industries, 70 pages; miscellaneous industries, 53 pages; the glass industry, 33 pages; economic, social, and census statistics, 83 pages; cereal crops and farm animals, 50 pages; railroad statistics, 31 pages.

WOMEN WAGE EARNERS OF INDIANAPOLIS.—The statistics relating to this subject are compiled from the reports of 500 working women in Indianapolis engaged in 20 different industries. The reports were secured by a personal canvass, a representative number being selected for each industry. The questions were designed to obtain detailed information under the following heads:

1. Origin: viz, nativity of girl and of parents, whether city or country reared, and occupation of father.
2. Personal and industrial surroundings.
3. Wages and earnings.
4. Expenses and savings.

All but 31 of the 500 girls involved were born in the United States, and 359 were born in Indiana. Eleven working girls' parents were natives to every 9 girls' parents who were foreign. Eighty-four per cent of the girls were reared in the city. Forty per cent of the girls' fathers were mechanics, 31 per cent laborers, 15 per cent tradesmen, 6 per cent professional men, and 8 per cent in miscellaneous occupations. Nine-tenths of the girls were unmarried, and 86 per cent were living at home.

The facts presented in the following statement have been selected from the tables showing statistics concerning the origin and personal and industrial surroundings of the working girls of Indianapolis:

PARENTAGE, CONJUGAL CONDITION, AND AGE OF WOMEN WAGE EARNERS,
INDIANAPOLIS.

Industry or occupation.	Reared in—		Occupation of father.					Conjugal condition.			Average age.
	City.	Country.	La-borer.	Me- chanic	Trades- man.	Profes- sional man.	Mis- cella- neous.	Single.	Mar- ried.	Wid- owed.	
Bindery.....	59	1	13	28	9	7	3	53	3	4	24.4
Bookkeeping.....	9	1	.....	5	2	.....	3	10	.....	.....	24.7
Candy factory.....	10	.....	3	5	.....	.....	2	9	1	.....	22.6
Card factories.....	15	5	11	7	.....	.....	2	20	.....	.....	19.7
Carpet sewers.....	10	.....	1	4	2	.....	3	8	.....	2	32.5
Chain, etc., makers.	6	4	4	3	1	.....	2	10	.....	.....	19.8
Cotton mills.....	15	5	10	9	1	.....	.....	18	1	1	20.3
Dressmaking.....	22	8	11	12	4	2	1	26	1	3	28.5
Hair dressing.....	8	2	3	6	.....	1	.....	10	.....	.....	20.9
Laundry.....	27	13	24	10	4	1	1	36	2	2	26.3
Millinery.....	26	4	6	10	6	4	4	26	3	1	25.2
Pants, shirts, etc...	39	21	30	21	6	3	.....	50	4	6	27.2
Paper box factory..	9	1	4	6	.....	.....	.....	10	.....	.....	19.9
Pork packing house	9	1	7	2	1	.....	.....	9	.....	1	26.0
Saleswomen.....	95	5	17	36	28	7	12	95	2	3	23.3
Stenographers, etc..	17	3	2	4	6	2	6	18	2	.....	22.7
Telephone.....	10	.....	1	7	1	1	.....	10	.....	.....	21.3
Tile works.....	15	5	6	12	1	.....	1	12	7	1	22.4
Tobacco factory.....	10	.....	1	7	2	.....	.....	9	1	.....	22.5
Woolen mills.....	10	.....	3	6	1	.....	.....	10	.....	.....	23.7
Total.....	421	79	157	200	75	28	40	449	27	24	<i>a</i> 23.7

The averages obtained from some of the other important subdivisions of the inquiry are given in the following summary:

WORKING TIME, EARNINGS, AND EXPENSES OF WOMEN WAGE EARNERS,
INDIANAPOLIS.

Industry or occupation.	Average—							Girls who save money.	
	Age of beginning work.	Hours of work.		Weeks of vacation.	Unproductive weeks.	Earnings of past year.	Expenses of past year.	Number.	Average savings for year.
		Daily, except Saturday.	Saturday.						
Bindery.....	17.4	10.0	9.0	1.0	5.3	\$260	\$253.28	7	\$57.60
Bookkeeping.....	19.7	8.7	8.3	1.6	4.0	494	448.60	4	113.25
Candy factory.....	15.7	10.0	8.5	.8	7.0	220	215.00	1	50.00
Card factories.....	14.9	10.0	9.5	.2	12.3	169	166.50	1	25.00
Carpet sewers.....	18.5	9.5	9.2	.7	7.3	269	266.50	1	25.00
Chain, etc., makers.....	17.2	10.3	8.0	.....	16.2	156	146.00	1	100.00
Cotton mills.....	14.5	10.0	9.5	1.3	8.1	201	201.00	.....	.....
Dressmaking.....	18.7	9.4	10.1	.6	9.1	255	231.78	10	69.66
Hair dressing.....	15.4	9.7	13.3	1.6	4.3	248	245.60	2	12.00
Laundry.....	16.1	10.0	8.0	1.0	5.4	300	283.00	10	67.92
Millinery.....	17.0	9.4	13.0	1.7	14.9	427	392.87	10	102.39
Pants, shirts, etc.....	17.6	10.2	7.6	.2	6.9	250	230.90	13	88.15
Paper box factory.....	17.3	9.5	8.3	.....	7.9	124	124.00	.....	.....
Pork packing house...	17.5	8.9	8.9	.....	11.0	190	185.00	2	25.00
Saleswomen.....	16.6	9.3	13.0	1.7	4.8	265	246.10	25	75.60
Stenographers, etc....	18.3	8.3	7.9	1.6	7.1	346	319.90	6	87.00
Telephone.....	15.8	9.0	9.0	1.8	5.3	241	223.00	4	45.00
Tile works.....	17.2	8.0	5.0	.2	5.1	158	155.50	1	25.00
Tobacco factory.....	14.9	8.2	7.6	.8	4.8	209	204.50	2	22.50
Woolen mills.....	13.8	10.0	10.0	.....	20.0	227	219.50	2	37.50
Average.....	<i>a</i> 16.7	<i>a</i> 9.4	<i>a</i> 9.1	<i>a</i> .9	<i>a</i> 8.3	<i>a</i> 250	<i>a</i> 237.97	102	<i>a</i> 51.43

a These averages were apparently obtained by adding together the industry averages and dividing the sum by the total industries, 20, and hence take no account of the number of individuals in each industry. True averages might vary considerably from those here given.

LABOR ORGANIZATIONS.—Two forms of blanks were used in gathering the statistics of labor organizations—one contained interrogatories submitted to the secretaries of the organizations and the other inter-

rogatories to which the members were requested to furnish replies. Information was solicited concerning average wages, working hours, days employed, apprentices, dues and benefits, age, nativity, conjugal condition, number in family, number who owned homes or shares in building and loan associations, etc. Two hundred and seventeen organizations, representing 66 trades and callings, with a membership of 19,081, were reported by the secretaries. The average daily wages for the entire state was given as \$2.34, and the average working hours per day 9.7. The average daily wages for apprentices was 98 cents. The average weekly dues of labor organizations was reported as 11.3 cents. One thousand one hundred and forty-two individual members reported their average age as being 33 years and their average daily wages \$2.40. Of the number reported 895 were native born, 244 owned their homes, and 249 owned shares in building and loan associations, the shares aggregating in value \$126,621. The statistics for each organization are given in detail as reported by the secretaries and by the members. The results are summarized by cities, and it is believed the tables represent fully 90 per cent of all the labor organizations of the state.

DOMESTIC LABOR.—The inquiry in regard to domestic labor was designed to ascertain the actual economic condition of domestic labor in the principal cities of the state. Six hundred and thirty-eight representative reports were secured from the eight largest cities, the number for each city being in proportion to the population. Care was taken to secure the reports from different sections of the respective cities. The results are presented by totals for the different cities under the following general heads:

1. Personal condition of domestics.
2. Parents of domestics.
3. Work and wages of domestics.
4. Earnings, expenses, and savings of domestics.

The statistics are analyzed with great care and at considerable length. Only a few of the important facts can be presented here, and they may be summarized as follows:

DOMESTIC LABOR.

City.	Number.			Born in—		Reared in—		Read and write.	
	White.	Colored.	Total.	United States.	Foreign countries.	City or town.	Country.	Yes.	No.
Indianapolis	168	66	234	166	68	90	144	193	41
Evansville	79	23	102	95	7	33	69	92	10
Fort Wayne	70	.....	70	48	22	30	40	67	3
Terre Haute	57	5	62	53	9	22	40	57	5
New Albany	31	17	48	45	3	17	31	41	7
South Bend	45	1	46	20	26	20	26	45	1
Richmond	34	6	40	35	5	24	16	37	3
Lafayette	36	.....	36	25	11	24	12	33	3
Total	520	118	638	487	151	260	378	565	73
Per cent	82	18	.....	76	24	40	60	89	11

DOMESTIC LABOR—Concluded.

City.	Occupation.			Average—			
	House-work.	Cook.	Other domestic work.	Age.	Earnings of past year.	Places employed in.	Saved in past year.
Indianapolis	120	61	53	26	\$145.77	1.8	\$23.86
Evansville	60	24	18	26	121.27	1.6	17.19
Fort Wayne.....	54	7	9	23	118.35	1.7	15.45
Terre Haute.....	50	8	4	26	124.40	1.9	14.45
New Albany.....	30	11	7	27	117.22	1.6	21.46
South Bend.....	38	5	3	23	145.12	1.7	27.35
Richmond.....	28	5	7	26	122.25	1.5	25.67
Lafayette	27	6	3	24	130.94	1.5	28.61
Total.....	407	127	104	<i>a</i> 25	131.97	<i>a</i> 1.7	<i>a</i> 21.75
Per cent.....	64	20	16	.....	.....	.....	.....

a These averages were apparently obtained by adding together the city averages and dividing the sum by the total cities, 8, and hence take no account of the number of individuals in each city. True averages might vary considerably from those here given.

COAL MINING.—The statistics relating to coal mining, as reported by the operators of 71 coal mines in Indiana, representing an invested capital of \$1,374,440 and a yearly wage account of \$2,473,806, are shown for each mine; also individual reports for 961 miners representing 81 mines. The data were obtained by a personal canvass, “and may be said to show, not approximately, but correctly, the matters which it was designed to call out by the questions.” The questions addressed to the miners obtained informaton concerning age, social relations, nativity, hours of work, cost of and price paid for mining coal, daily wages, net earnings, etc. The presentation is a complete showing for the coal mining industries of the state.

IRON, WOOD, GLASS, AND MISCELLANEOUS INDUSTRIES.—The statistics of iron industries, wood industries, miscellaneous industries, and the glass industry were compiled from returns secured on a personal canvass of 375 establishments, 101 of which were engaged in various iron industries, exclusive of blacksmith and repair shops, 163 in the manufacture of articles in which wood is the exclusive or chief material, 45 in the manufacture of glass, and 66 in miscellaneous industries. The establishments report the employment of 40,253 hands, and of this number individual reports were secured from 2,423, distributed as follows: 577 in the iron, 1,035 in the wood, 134 in the glass, and 677 in the miscellaneous industries. The reports of the proprietors and of the employees, respectively, are published in detail by cities, industries, and occupations.

The proprietors' reports furnish data as to capital, cost of materials, value of products, working time, number of employees, total wages, highest and lowest daily wages, and average wages of boys and of women and girls; also as to strikes and increase or decrease in wages.

The following statements show the totals for the different groups of industries under the principal heads of this branch of the inquiry:

VALUE OF PRODUCTS, WAGES, ETC., IN VARIOUS INDUSTRIES.

Industry.	Estab-lish-ments.	Buildings, grounds, and machinery.	Cost of materials.	Value of products	Total wages.
Iron.....	101	\$5, 830, 231	\$9, 146, 897	\$18, 069, 340	\$4, 174, 891
Wood.....	163	4, 615, 430	9, 994, 589	18, 403, 267	4, 900, 008
Glass.....	45	4, 987, 635	1, 865, 805	6, 493, 518	2, 950, 758
Miscellaneous.....	66	4, 358, 993	15, 816, 082	21, 009, 450	2, 459, 808
Total.....	375	19, 792, 289	36, 823, 373	63, 975, 575	14, 485, 465

AVERAGE DAILY WAGES IN VARIOUS INDUSTRIES.

Industry.	Employees.			Average daily wages.					
	Men.	Boys.	Women and girls.	Boys.	Women and girls.	Skilled labor.		Unskilled labor.	
						High-est.	Low-est.	High-est.	Low-est.
Iron.....	10, 514	1, 250	146	\$0. 74	\$1. 04	\$3. 75	\$1. 92	\$1. 50	\$1. 13
Wood.....	11, 393	1, 842	310	. 71	. 90	2. 85	1. 72	1. 48	1. 11
Glass.....	5, 163	1, 536	195	. 82	. 67	9. 48	3. 34	1. 99	1. 26
Miscellaneous.....	4, 035	466	3, 403	. 79	. 88	3. 20	1. 82	1. 45	. 91
Total.....	31, 105	5, 094	4, 054	.....	.....	.....	.....	.....	.....

The employees' statements contain data as to age, apprenticeship, number of years engaged in present occupation, working time, highest, lowest, and average wages, social condition, income, expenses, etc., for the different classes of employees in each industry treated.

The principal facts reported by the employees are summarized as follows:

CONDITION, EARNINGS, ETC., OF EMPLOYEES IN VARIOUS INDUSTRIES.

Industries.	Employees.					Average.						Savings.	
	Num-ber re-port-ing.	Mar-ried.	Sin-gle.	Own-ing homes.	Rent-ing.	Wages.			Hours per day.	Days per year.	An-nual in-come.	Em-ploy-ees who saved.	Total savings for year.
						High-est.	Low-est.	Aver-age.					
Iron.....	577	468	109	223	232	\$2. 65	\$2. 26	\$2. 45	9. 1	257	\$610	168	\$24, 164
Wood.....	1, 035	774	261	356	397	2. 15	1. 93	2. 03	9	274	558	199	22, 621
Glass.....	134	108	26	22	85	4. 80	4. 08	4. 41	8. 4	212	1, 022	83	11, 345
Miscellaneous.....	677	255	422	76	161	1. 86	1. 44	1. 59	10	259	448	61	8, 459
Total.....	2, 423	1, 605	818	677	875	.....	.....	.....	.....	.....	.....	511	66, 589

ECONOMIC, SOCIAL, AND CENSUS STATISTICS.—Under this caption are presented county, city, and town indebtedness and expenses, also real estate transfers, mortgages, and satisfactions recorded in the several counties of the state. These tables show also the number and condition of inmates of asylums, number of divorces, with the causes of complaint, number of persons naturalized, and number of jail incarcerations. Some of the results of the Eleventh Census of the United States are reproduced.

CEREAL CROPS AND FARM ANIMALS.—The figures and analysis given relating to cereal crops and farm animals constitute a full presentation of the agricultural industries of the state, by county and by state totals.

RAILROADS.—The statistics relating to railroads show in the usual form the totals for 31 roads that were in operation in the state in 1893 and 25 in 1894, some companies not furnishing their reports for 1894 in time to be included.

MICHIGAN.

The Twelfth Annual Report of the Bureau of Labor and Industrial Statistics of Michigan, for the year ending February 1, 1895, presents the results of investigations into the following subjects: Farm laborers, male, 236 pages; domestic labor, female, 101 pages; statistics from farm proprietors, 109 pages; miscellaneous agricultural statistics, 55 pages; strikes, 21 pages; prisons and prison labor, 4 pages.

FARM AND DOMESTIC LABOR.—The statistics presented under the titles of "Male farm laborers" and "Female domestic labor" are the results obtained from reports made by 5,600 male farm laborers and 2,300 female domestic laborers. The data were collected by the enumerators while engaged in taking the state census. The schedules contained numerous questions as to nationality, age, working time, wages, extras, increase or decrease in wages during given periods, effect of immigration on occupation, etc., as well as questions concerning social conditions. Some of the important results of both investigations are combined in the following summary:

LABORERS ON FARMS AND DOMESTIC SERVANTS.

Items.	Male farm laborers.	Female domestics.
Total number considered.....	5,600	2,300
Americans	3,219	1,431
Germans	726	312
All other nationalities.....	1,655	557
Average monthly wages.....	\$17.84	.....
Average weekly wages.....	.....	\$1.85
Average daily wages.....	\$0.92	\$0.59
Total earnings past year.....	\$1,018,388	\$168,464
Average yearly earnings.....	\$181.85	\$73.24
Amount of money saved past year.....	\$196,891	\$34,528
Average amount for those who saved.....	\$77.67	\$34.80
Number reporting increase in wages past five years.....	335	324
Number reporting decrease in wages past five years.....	3,395	675
Number who say times better than five years ago.....	146	177
Number who say times worse than five years ago.....	4,542	1,367
Number who say immigration injures their occupation.....	3,466	834
Average daily wages of foreigners in native land.....	\$0.557	\$0.25
Number of foreigners who say conditions for saving money are better than in native land.....	1,099	348

In some of the returns answers were not given to all the questions. It therefore does not follow that the difference between the number given for any particular item in the above summary and the total number considered represents the number reporting the reverse from what is shown. The report presents the statistics in detail for each laborer, male and female, from whom returns were received.

STATISTICS FROM FARM PROPRIETORS.—These facts were furnished by 935 farmers in Michigan. The effort was made to obtain reports from a reasonable number in each county, that the showing might be general for the state. The inquiries not only covered the question of wages and the condition of wage workers on farms, but also questions pertaining to the staple products of the farms. The average yield and cost of production of leading crops are shown. The number of farmers reporting profit and no profit in stock raising, in dairying, and in poultry raising is also given.

The details shown by the tables are numerous and worthy of careful study, but only a few of the many important results can be stated. The average number of years in which those reporting had been engaged in farming was 25.7. Four hundred and fifty-four employed female help, the average weekly wages for such labor being \$1.94. The average monthly wages for males was \$18.85. Adding the value of extras, such as fuel, pasture for cow, house rent, etc., made the average daily wages paid male farm laborers for the entire state over \$1. The average yield and the average cost of raising per acre, including interest on value of land, is shown for a number of farm products, the results being summarized as follows:

AVERAGE YIELD AND COST PER ACRE OF RAISING CERTAIN FARM PRODUCTS.

Product.	Yield per acre.		Cost of raising per acre.	
	Farmers reporting.	Average (bushels).	Farmers reporting.	Average.
Wheat.....	859	18.8	737	\$9.78
Corn.....	849	57.4	696	10.35
Oats.....	864	35.1	692	7.74
Barley.....	161	28.5	167	7.84
Potatoes.....	763	107.9	558	14.84
Beans.....	254	16.1	237	8.42
Peas.....	239	16.4	189	7.71
Clover seed.....	268	2.2	214	4.90
Hay.....	881	<i>a</i> 1.4	688	5.42
Mint.....	13	<i>b</i> 18.3	11	15.16

a Tons.*b* Pounds.

About 56 per cent of the farmers reporting are satisfied that there is a profit in dairying, less than 37 per cent that there is a profit in fattening cattle for market, and only 15 per cent that there is a profit in raising horses for sale. Two-thirds of those canvassed say there is a profit in raising poultry for market, and 82 per cent that there is profit in fattening hogs for market. Six hundred and thirty-four of the 935 reporting say there is profit in farming, 162 say there is no profit, and 139 do not answer the question.

These statistics are followed by general remarks from a number of leading farmers in different sections of the state on methods, profits, and the desirability of farming as an industry.

MISCELLANEOUS AGRICULTURAL STATISTICS.—The presentations under the head of miscellaneous agricultural statistics are compilations

from the United States census of 1890 and the state census of 1894. They show the size and value of farms with the value and quantity of farm products, by counties and by townships.

STRIKES.—Each strike that occurred in the state during 1894 is described, and is followed by general information concerning some of the large strikes that occurred elsewhere.

PRISONS AND PRISON LABOR.—The number of inmates in the state prison and in the different houses of correction during 1894 is given. The number engaged on contract work, with the average price per day for their work, is shown; also the number engaged on state work.

MINNESOTA.

The Fourth Biennial Report of the Bureau of Labor of Minnesota is for the years 1893 and 1894. In the introduction to the report the law approved April 19, 1893, changing the name of the office from the Bureau of Labor Statistics to the Bureau of Labor, is quoted, and the general work of the bureau outlined. The contents of the report are as follows: Chattel mortgages and pawnbrokers' loans, 43 pages; agricultural statistics, 66 pages; the apprentice system, 257 pages; mortgage statistics, 164 pages; factory inspection, 125 pages.

CHATTEL MORTGAGES AND PAWNBROKERS' LOANS.—The statistical information presented under this title is the result of an examination of the contracts, leases, mortgages, and other instruments, having the force of chattel mortgages, filed at the city clerk's office of Minneapolis during the year 1893. For the pawnbrokerage business of the city during the same year the data were obtained from the returns made to the chief of police.

The instruments classified as chattel mortgages are divided into two general classes—the first including those executed to secure the cost price of goods purchased and the second those executed to guarantee the repayment of borrowed money. Some of the principal facts concerning the first class are summarized as follows:

INTEREST ON CHATTEL MORTGAGES, MINNEAPOLIS, 1893.

Interest or credit charge.	Number of instruments.	Goods purchased.					
		Household goods.	Musical instruments.	Carriages, wagons, live stock, etc.	Merchandise.	Farm machinery.	Miscellaneous.
Six per cent per annum	20	.....	7	.....	2	.....	11
Seven per cent per annum ...	100	5	76	2	1	1	15
Eight per cent per annum....	842	13	763	4	6	.....	56
Ten per cent per annum.....	842	781	23	15	2	.....	21
No interest charged.....	3,591	2,888	124	20	68	3	488
Five per cent addition.....	5,540	5,540	.....	.....	.....	.....	.....
Total.....	10,935	9,227	993	41	79	4	591

The number of instruments under the head of "no interest charged" is slightly greater than it actually should be by the inclusion of a few for which the record contained no information as to the interest charged.

Household goods and musical instruments taken together make up about 93 per cent of the sales where chattel mortgages were executed to secure the cost price of the articles purchased. The selling price of the goods purchased by residents of Minneapolis, on the chattel mortgage system, during the year 1893 amounted to \$772,537.36. The instruments making the record of these sales show a cash payment at the time of purchase of \$110,827.90, leaving a debt of \$661,709.46. The average duration of the credit was 5.35 months. These amounts do not include sales for cash or unsecured credit, nor for secured credit to parties residing outside of the city limits.

The chattel mortgages given to secure the repayment of borrowed money are also divided into two classes—those at legal and those at usurious and extortionate rates of interest. The division, however, can only be made approximately. Of chattel mortgages made to secure loans and not known to be extortionate in their interest charges there were 2,171 in 1893, representing an indebtedness of \$515,845.06, the average for each mortgage being \$237.61, with a duration of 5.36 months. It is believed, however, that some 500 of these loans were at usurious interest, which would reduce the number at strictly legal interest to 1,671, representing a mortgage debt of \$495,600.06, the average of the loans being \$296.59, and the life of the mortgage 5.75 months.

There were 2,211 usurious loans reported for the year, the face of the mortgage debt amounting to \$89,310.02, on which the borrowers probably realized about \$80,000 in cash. The borrowers giving these mortgages, so far as could be ascertained, always executed liens for sums about 10 per cent greater than the loans secured by them. The average debt for these loans was \$40.49, hence the average loan or money obtained was, approximately, \$36. Two-thirds of these loans were secured on household goods. Selecting 95 typical usurious loans, the rate of interest was found, upon inquiry of the borrowers, to range from 41 to 480 per cent per annum. Including the loans classed as legal, but probably usurious, there were, approximately, 2,700 usurious loans in the city during the period covered, representing \$110,000, upon which the borrowers obtained less than \$100,000 in cash.

There were twenty-five licensed pawnbrokers doing business in Minneapolis in 1893, who paid as license fees \$2,458.34. Twenty-three thousand and ninety loans were reported by these brokers, the total amount borrowed being \$142,248.12, and the average for each pledge \$6.16. There were 5,425 purchases reported by pawnbrokers, the total amount paid therefor being \$15,055.19.

The statistics of chattel mortgages and pawnbrokers' loans are presented in detail and accompanied by an extended textual discussion, in which various loan institutions in the United States and in foreign countries, established primarily for the relief of the poor, are described.

AGRICULTURAL STATISTICS.—This is the result of an inquiry started in the summer of 1893 and designed to ascertain something of the actual and relative prosperity, the elements of success, and the causes of failure among the farmers of the state. The data were obtained by agents of the bureau, who secured reports from 1,555 farm owners and 243 farm tenants. In securing these reports counties and townships were selected that were supposed to be representative of the entire state. All the farms in each township selected were visited, and so far as possible returns were secured from each. The following summaries indicate the character of some of the principal branches of the inquiry and the results obtained:

VALUE OF AGRICULTURAL PROPERTY.

State or country of birth.	Farmers.	Tenants.	Years' farming in Minnesota.		Value of possessions at beginning.		Value of present possessions.	
			Farmers.	Tenants.	Farmers.	Tenants.	Farmers.	Tenants.
Minnesota	144	39	1,725	382	\$196,305	\$10,755	\$793,466	\$43,860
United States	377	78	6,950	740	437,707	26,440	2,891,937	119,504
Germany	317	49	6,157	307	266,930	15,525	1,843,318	67,690
Great Britain	95	5	2,289	63	72,100	1,050	615,234	3,906
Scandinavia	464	58	6,960	518	142,486	17,375	1,630,047	55,313
Bohemia	94	7	1,576	33	71,660	1,000	338,096	5,752
British Possessions ..	47	6	1,044	25	48,700	850	274,898	6,091
Other countries	17	1	382	8	3,610	.....	62,708	2,722
Total	1,555	243	27,083	2,076	1,239,498	72,995	8,449,704	304,838
Averages			17	9	797	300	5,434	1,254

INDEBTEDNESS OF FARMERS AND AGRICULTURAL TENANTS.

State or country of birth.	Amount of indebtedness.		Net possessions.	
	Farmers.	Tenants.	Farmers.	Tenants.
Minnesota	\$103,237	\$5,560	\$690,229	\$38,300
United States	311,997	17,016	2,579,940	102,488
Germany	166,818	9,784	1,676,500	57,906
Great Britain	53,224	600	562,010	3,306
Scandinavia	284,922	14,255	1,345,125	41,058
Bohemia	60,691	2,295	277,405	3,457
British Possessions ..	23,965	1,500	250,933	4,591
Other countries	3,900	.....	58,808	2,722
Total	1,008,754	51,010	7,440,950	253,828
Averages	649	210	4,785	1,045

The information contained in each of the 1,798 reports is shown in detail, including the several items constituting the total value of present possessions given in the above statement. The results are summarized and the averages shown by counties and by nationalities. The following statements are taken from the comments on the figures:

The possession of a sufficient amount of capital at the outset is the most potent single factor in the accumulation of farm wealth.

Of the 1,798 farmers visited, 17, or less than 1 per cent, had, by reason of debts and insufficient capital, dropped back from farm ownership to tenancy, while 235 had risen from tenancy to farm ownership after an average life as tenant of four years.

A little less than one-half of the tenants visited had such a small amount of capital that they rented farms for one-half of the produce, the landlord furnishing live stock, farm implements, and seed, or a large proportion thereof.

Thirty-one of the 1,555 owners, at some time in their lives, had lost a farm by mortgage foreclosure, but were able in a short time to retrieve their fortunes and regain their earlier place as farm owners.

The American-born farmer is seen to succeed considerably better than any body of newcomers from Europe.

THE APPRENTICE SYSTEM.—The treatment of the subject of the apprentice system is almost entirely textual. The history of the apprentice system is traced from its origin in the ancient craft or trade guilds of the Middle Ages. The relation between apprenticeship and strikes is treated at considerable length. The statistics of strikes involving the apprentice question, as published for Great Britain, the United States, and the state of New York, are reproduced to show the extent of the disturbances into which it enters as a factor. While in all three reports the apprentice question is shown to have been the source of some trouble, only a very small proportion of the industries have any serious trouble over it.

In order to secure as much information as possible in regard to the relation between apprenticeship and trade unions, and especially to ascertain whether the unions were controlled by the foreign-born population and whether the American boys were discriminated against in securing membership, the bureau obtained from members of trade unions in the state statements showing for each workman his birth-place, where he learned his trade, the years served as apprentice, and kindred information. Returns were received from 1,985 workmen, and of this number 58.54 per cent were born in the United States and 41.46 per cent were foreign born. On the other hand returns from 133,762 males of voting age in the state showed that only 38 per cent were native born. In other words, the percentage of native born workmen in the trade unions, or 58.54 per cent, was 1.5 times as great as the percentage of native born in the voting population, or 38 per cent. There were 1,624 members of the trade unions, or 81.86 per cent, who acquired their trade in the United States, while only 361, or 18.14 per cent, acquired their trade in foreign lands.

The attitude of a number of national and international labor organizations toward apprentices and cheap labor is discussed. The rules and regulations of the several organizations on this subject are quoted, and in those unions where the membership is composed largely of foreign-trained craftsmen facts are presented showing the cause or reason for the same. Where the unions are known to have had strikes in recent years relating to the employment of apprentices, all available facts relating to the dispute are presented. The actions of several associations of employers on the apprentice question are referred to, particular attention being given to the attitude of the National Association of Builders of the United States of America on this subject.

The last 11 pages of the discussion of the apprentice system consist of a summary in which the history of the system and its present status in the industries and trade unions of the United States is given in concise statements.

MORTGAGE STATISTICS.—The different sections of this subject are treated under the following heads: First, real estate mortgage indebtedness; second, mortgage foreclosures; third, redemptions of mortgage foreclosures. Under the first head are shown data relating to the mortgages placed on record, the amount of taxable land as reported by the state auditor, and the general agricultural statistics gathered by the United States census, and comparisons between the same and deductions therefrom. These statistics, as a rule, cover the period from 1880 to 1889, but for eight typical counties the bureau secured and presents statistics of mortgages and taxable land for each year from 1859 to 1893. All of the statistics presented under this general head of mortgages were gathered with the thought that possibly such information would throw new light upon the true relation of mortgage debt to the development and financial prosperity of the average Western community, agricultural or urban. In addition to statistical tables presenting the data of mortgages, agriculture, and taxable property by counties and groups of counties, the report contains graphic tables showing the leading facts for the different branches of the investigation. In the discussion of the figures the increase or decrease of the actual or relative mortgage debt in the different counties is traced, and careful explanation given of the various causes controlling the results shown.

The amount of mortgages placed on record in Minnesota and the acres mortgaged increased relatively, as well as actually, with some irregularity, from 1861 until about 1880. Since that date it has relatively continuously, though irregularly, decreased. In 1893 there was relatively 1 acre of farm land mortgaged for every 2.2 acres thus mortgaged in 1880, and there was \$1 of incumbrance on such farms for every \$1.80 of such incumbrance in the earlier year. While there had been this relative decrease of farm mortgages there had been a slight increase in the total actual amount of outstanding mortgage debt. But the farm debt of 1893 was, if any larger than that of 1880, increased by an amount so slight that such addition could not have exceeded 1 per cent of the property accumulated by the farmers of Minnesota and added to their former possessions between 1880 and 1893. The statistics relating to mortgage foreclosures are contained in five tables, which give the number, amount, and acreage of foreclosures by counties and groups of counties for each year during the period from 1880 to 1893, and for eight typical counties from 1859 to 1893, with percentages of taxable land sold on foreclosure and of mortgaged acres foreclosed.

The percentage of foreclosures of the mortgages executed and the general movement of foreclosure in city and agricultural property are

treated separately. The discussion shows the salient changes in the condition of agriculture and the causes affecting wheat prices and farm prosperity and the foreclosure of farm mortgages in the past thirty-five years in Minnesota.

The following extracts are selected from a list of fifteen conclusions reached after a careful analysis of the figures:

When the foreclosures of one year are compared with the mortgages recorded four years before [four years being the life of the average mortgage], it is found that the foreclosures on farm and acre property in the agricultural counties of the state in 1892 and 1893 were relatively 40 to 50 per cent smaller in number and in acres and amounts involved than in 1884 and 1885.

Between the years 1880 and 1881 and the years 1892 and 1893 the foreclosures on acre property so decreased that relatively only one farm was sold in the latter years by foreclosure where three farms were sold in the earlier, and that one acre of land was foreclosed where two had formerly been, and that the amounts of foreclosure sales had declined so, relatively, that only \$1 of such sales is now occurring where in 1880 there were \$4 of the same.

The foreclosures of 1892 and 1893 were relatively only one-fifth as numerous as twenty-four years before, in 1869 and 1870. The acres sold were only one-fourth and the amounts involved one-fifth as great in the latter as in the earlier years.

In the history of the state there can be traced two sources of mortgage foreclosure: One arises from the imperfection of the farm owner, that which is due to his lack of experience, his shiftlessness and want of character, or knowledge, or energy; the other is crop failures and varying prices for wheat.

In thirty-five years the rates of interest for farm loans have decreased from the prevailing rate of from 3 to 10 per cent a month in Mower County in 1859 and 1860 to an average of not far from 8 per cent per annum in 1893.

Crop failures by the introduction of diversified farming have ceased to be as great a possible factor for evil as between 1876 and 1881. Wheat prices as a special disturbing factor are becoming of less and less importance with the passage of years.

The data relating to the redemptions of mortgage foreclosures are not considered as complete or perfect. The redemptions for which statistics were secured include only those transactions whereby the original owner recovered possession by means of a legal instrument, placed upon record, usually designated a redemption. Many owners whose lands had been sold under foreclosure proceedings, instead of securing a redemption, obtained a quitclaim deed of the land. These redemptions by quitclaim deeds make up at least one-third of the total redemptions of the state, and in some counties one-half.

The statistics are presented only by groups of counties, and cover the period from 1880 to 1893, and for a group of eight typical counties from 1859 to 1893. From the textual consideration of the subject are taken the following extracts:

In the state as a whole there is an increase in the foreclosures on acres, but a greater one in redemptions. The reverse is the case with

lots, and shows that the financial condition of the farmers and owners of acre property has increased more than their debts, while the opposite is the case with the owners of other real estate.

In the sixty-five agricultural counties of the state there were in 1880 and 1881 for every 100 foreclosures on acre property 16 redemptions, while in 1892 and 1893 there were 22.6. In the earlier years there were for every \$100 of foreclosures \$12.03 of redemptions, while in the latter years there were \$16.21.

Comparing all foreclosures and redemptions in the city counties it is found that in 1880 and 1881 there were for every 100 foreclosures 33.3 redemptions, while in 1892 and 1893 there were only 6.4, or only one-sixth as many. In 1880 and 1881 for every \$100 of foreclosures on property in city counties there were \$20.84 of redemptions, while in 1892 and 1893 there were only \$5.53, or barely one-fourth as much.

Making allowance for the redemptions by quitclaim deeds in Minnesota [for which no data were secured] it becomes apparent that from one-fourth to one-third of all farm mortgages foreclosed in the state during the last few years were, or will be, redeemed by the owners of the farms.

FACTORY INSPECTION.—This subject constitutes Part II of the report of the bureau. Guards for dangerous machinery is the first subject treated, the discussion containing 16 illustrations of various machines to which different forms of guards have been attached. The statistics of accidents in the factories and mines of the state show the character of the machine on which the accident happened, or the cause of the same, and the character of the injury. There were 631 accidents reported between April 1, 1893, and December 31, 1894. Forty-three of these were reported by mines and 588 by factories.

The laws of the state regulating the employment of women and children, and various laws bearing on labor and labor organizations, are quoted and amendments recommended.

The condition of guards for switch rails, guard rails, and frogs in 1893 and 1894 on the various railroads in the state is shown.

Between May 1, 1893, and December 31, 1894, the inspectors visited 1,388 different factories and mills in the state. At the time of the first inspection in 1893 these establishments employed 38,866 operatives, of whom 34,436 were males and 4,430 females. The name and address, facts concerning employees and wages, and the various changes in the buildings and machinery ordered by the inspectors are given for each factory inspected. The detail tables are summarized according to the character of the changes ordered and by industries.

MISSOURI.

The Sixteenth Annual Report of the Bureau of Labor Statistics and Inspection of Missouri is for the year ending November 5, 1894. The first pages of this report contain a discussion of existing conditions and tendencies of the times, and a synopsis of the current work of other labor bureaus. The substance of the report is divided as follows: Earnings of employees in lead mines, 33 pages; statistics of

manufactures, 149 pages; factory inspection, 35 pages; crimes and costs, 125 pages; building and loan associations, 138 pages; strikes, 19 pages.

EARNINGS OF EMPLOYEES IN LEAD MINES.—Under this subject reports for 1,281 employees in three representative lead mines in different sections of the state, concerning the number of working days, days actually worked, and actual and average earnings are given in detail for each employee. The results are summarized as follows:

TIME AND EARNINGS OF EMPLOYEES OF LEAD MINES, 1893.

Items.	Total.	Name of company.		
		Doe Run.	Center Creek.	Victor.
Total number of men employed.....	1, 281	709	161	411
Number of men required to have done the work if each man had worked each working day in the year.....	318+	206	71+	40+
Per cent of days worked of working days in period.....	79+	79. 73	82+	73+
Average daily wages for days worked in period.....	\$1. 60	\$1. 49	\$1. 82	\$1. 76
Average daily wages for working days in period.....	\$1. 27	\$1. 19	\$1. 51	\$1. 29
Average earnings for each man.....	\$123. 41	\$129. 23	\$251. 72	\$53. 41
Average number of days each man worked.....	77 —	90. 50+	137	30+
Average number of working days to each man.....	97 —	113. 73+	166	41+
What the average annual earnings would have been if each man had worked every working day in period at the average rate of daily wages for days worked.....	\$497+	\$440. 20	\$564. 20	\$545. 60

STATISTICS OF MANUFACTURES.—The statistics of manufactures collected by the bureau are preceded by a reproduction and discussion of the results of the United States census. The bureau secured reports from 757 private firms and 716 corporations. The number of male and female partners and stockholders, aggregate and average values of capital, stock used, wages, goods made, and proportion of business done are shown by industries, the summary for all industries being as follows:

MANUFACTURING INDUSTRIES, 1893.

Establishments reporting:	
Number of private firms.....	757
Number of corporations.....	716
Total.....	1, 473
Number of partners:	
Males.....	1, 062
Females.....	21
Total.....	1 083
Number of stockholders:	
Males.....	6, 325
Females.....	815
Banks, trustees, etc.....	167
Total.....	7, 307
Amount of capital invested.....	\$101, 457, 303
Stock of material used.....	\$82, 095, 133
Other supplies.....	\$11, 481, 109
Total.....	\$93, 576, 242
Wages.....	\$25, 840, 921
Value of goods made and work.....	\$153, 896, 260
Average proportion of business, per cent.....	67
Average number of days in operation.....	274

The report also shows, by industries, the smallest, greatest, and average number of employees; also the number of male and female employees, respectively, engaged during each month, and the number at specified weekly rates of wages. The summary under the last-named classification for the 1,473 establishments is as follows:

CLASSIFIED WEEKLY WAGES IN 1,473 MANUFACTURING ESTABLISHMENTS, 1893.

Weekly wages.	Males.	Females.	Total.
Under \$5.....	4, 594	4, 088	8, 682
\$5 and under \$6	1, 677	2, 515	4, 192
\$6 and under \$7	2, 515	1, 934	4, 449
\$7 and under \$8	3, 790	918	4, 708
\$8 and under \$9	4, 354	580	4, 934
\$9 and under \$10	8, 962	314	9, 276
\$10 and under \$12	6, 343	167	6, 510
\$12 and under \$15	8, 494	196	8, 690
\$15 and under \$20	5, 775	101	5, 876
\$20 and over	1, 760	4	1, 764
Total	48, 264	10, 817	59, 081

FACTORY INSPECTION.—In the part of the report relating to this subject a synopsis of the orders issued by the inspectors, and the compliance or noncompliance, is given; also the names and addresses of the factories. The approximate number of employees in the different industries in Saint Louis, their condition, surroundings, and wages are shown in connection with the results of the inspection in the other principal cities of the state.

CRIMES AND COSTS.—Under the head of crimes and costs the character of the misdemeanors and felonies, the number of cases in each class, with the number of convictions and acquittals, also the amount of the costs paid by the state and counties, are shown for each county and class of crime. The statistics are preceded by an extended analytical text explaining the figures and making useful deductions. The totals for the state show 10,780 cases (not persons) of misdemeanor during the year, for which the counties paid costs amounting to \$245,941.59. There were 3,291 cases of felony, in which the costs amounted to \$286,104.89, the average cost for each case reported being \$86.93, as compared with \$22.81 for each case of misdemeanor. In addition to the items mentioned, the tables show, by counties, for each day of 1893 the number of persons delivered to the penitentiary, their color, age, nativity, occupation, sex, conjugal condition, and term of sentence.

BUILDING AND LOAN ASSOCIATIONS.—The statistics of building and loan associations are shown in detail for each association, the results being presented in eight tables: No. 1, showing assets; No. 2, liabilities; No. 3, receipts; No. 4, disbursements; No. 5, gross profits; No. 6, net profits; No. 7, authorized capital, par value of shares, membership fee, plan, premium, and rates of premium; No. 8, record of shares, record of shareholders, homes paid for, and homes partially paid for. The laws of other states and the different plans of conducting associations are discussed.

The building and loan associations in the city of Saint Louis are treated separately from those in the state exclusive of the city, and the totals combined. Three hundred and fifty-five active associations are given for the year 1894, reports being received from 314, while 41 known to be in existence failed to make reports. One hundred and eighty-nine of the associations were in the city of Saint Louis and 166 in the state outside of the city. Three hundred and seventy-six associations were reported for the state in 1893; 21 others had been incorporated in 1893, making the total number of associations having a nominal existence 397. If to the number 355, supposed to be active in 1894, be added those in liquidation and chartered in 1894 previous to July 1, the total number will be about the same as 1893. Some of the totals shown for all associations for 1894 are summarized as follows:

BUILDING AND LOAN ASSOCIATIONS, 1894.

Items.	Saint Louis.	State, exclusive of Saint Louis.	Total.
Assets	\$22, 303, 446. 15	\$11, 101, 149. 88	\$33, 404, 596. 03
Liabilities:			
Value of shares outstanding, including gain.....	\$17, 995, 099. 59	\$9, 136, 053. 10	\$27, 131, 152. 69
Other liabilities, including undivided profits.....	4, 308, 346. 56	1, 965, 096. 78	6, 273, 443. 34
Total	22, 303, 446. 15	11, 101, 149. 88	33, 404, 596. 03
Receipts:			
Cash on hand at close of last fiscal year.....	\$230, 535. 81	\$225, 219. 72	\$455, 755. 53
Cash receipts in last fiscal year, exclusive of loans repaid.....	8, 728, 627. 45	3, 345, 618. 68	12, 074, 246. 13
Loans repaid	1, 866, 675. 95	829, 169. 12	2, 695, 845. 07
Total	10, 825, 839. 21	4, 400, 007. 52	15, 225, 846. 73
Disbursements:			
Loans on mortgage security.....	\$1, 929, 614. 95	\$1, 682, 241. 23	\$3, 611, 856. 18
Withdrawals.....	2, 787, 142. 86	1, 630, 897. 03	4, 418, 039. 89
Borrowed money repaid.....	4, 329, 279. 38	379, 253. 81	4, 708, 533. 19
Other disbursements, including cash on hand.....	1, 779, 802. 02	707, 615. 45	2, 487, 417. 47
Total	10, 825, 839. 21	4, 400, 007. 52	15, 225, 846. 73
Profits:			
Expenses.....	\$2, 374, 584. 35	\$776, 321. 93	\$3, 150, 906. 28
Net profits	5, 307, 559. 68	2, 340, 237. 16	7, 647, 796. 84
Gross profits	7, 682, 144. 03	3, 116, 559. 09	10, 798, 703. 12
Number of shares issued during the year.....	21, 687. 95	39, 560. 00	61, 247. 95
Number of shares withdrawn during the year.....	63, 069. 33	42, 289. 75	105, 359. 08
Number of shares loaned on during the year.....	7, 201. 51	10, 129. 29	17, 330. 80
Present total number of shares loaned on.....	95, 162. 01	48, 112. 39	143, 274. 40
Present total number of free shares.....	122, 858. 98	112, 411. 67	235, 270. 65
Present total number of all shares.....	218, 020. 99	160, 524. 06	378, 545. 05
Total number of borrowers.....	7, 287	10, 474	17, 761
Total number of nonborrowers	20, 608	22, 730	43, 338
Total number of persons who are shareholders.....	27, 895	33, 204	61, 099
Homes secured and paid for.....	111	1, 082	1, 193
Number of homes partially paid for.....	7, 226	7, 004	14, 230

STRIKES.—A brief account is given of two interstate strikes—the strike originating with the employees of Pullman's Palace Car Company, of Pullman, Illinois, and the coal miners' strike of April 21; also of several minor strikes in the city of Saint Louis.

The report is accompanied with an industrial map showing the location of all mines and railroads in the state and a résumé of the mineral statistics.

WISCONSIN.

The Sixth Biennial Report of the Commissioner of Labor, Census and Industrial Statistics of Wisconsin, for the years 1893 and 1894, treats of the following subjects: The building trades, 64 pages; statistics of manufactures, 55 pages; synoptical report of and orders issued by inspectors of factories and workshops, 206 pages.

BUILDING TRADES.—The first presentation consists of reports from persons engaged in various branches of the building trades in different sections of the state. Answers were obtained to questions concerning apprenticeship, system of promotion of apprentices, did best workmen serve as apprentices in Europe, trouble in hiring first-class workmen, hours of labor, strikes, etc. Reports from employers, representing 2,674 employees, giving the actual wages per hour, are also shown, the statistics being grouped by occupations and cities and covering all branches of the building trades. The wages paid per hour in these trades in the city of Milwaukee are placed in comparison with the wages in similar trades in the several cities of the United States. Considering the general average rate per hour for all the trades involved, the results for some of the cities are given as follows:

RATES OF WAGES PER HOUR IN BUILDING TRADES IN VARIOUS CITIES, 1893.

City.	Wages per hour.
Milwaukee, Wisconsin	\$0. 296
Atlanta, Georgia.....	. 213
Buffalo, New York.....	. 286
Butte, Montana .....	. 476
Charleston, South Carolina.....	. 216
Cleveland, Ohio .....	. 301
Jacksonville, Florida.....	. 240
Kansas City, Missouri .....	. 286
Lowell, Massachusetts .....	. 274
Newark, New Jersey.....	. 332
Omaha, Nebraska .....	. 344
Philadelphia, Pennsylvania .....	. 325

STATISTICS OF MANUFACTURES.—The statistics of manufactures show for each of 84 different industries the number and per cent of employees receiving stated daily wages including the per cent receiving less than \$1 per day. The total amount of wages paid in different industries in the state is shown for each year from 1888 to 1893, inclusive, and the average annual earnings per employee in the different industries for each year from 1889 to 1893, inclusive.

The following statement presents the average annual wages paid in some of the leading industries treated in the summary table:

AVERAGE ANNUAL WAGES PAID IN VARIOUS INDUSTRIES, 1889 TO 1893.

Industry.	1889.	1890.	1891.	1892.	1893.
Agricultural implements.....	\$427.58	\$558.41	\$515.87	\$543.98	\$649.34
Beef and pork packing.....	531.17	498.89	571.75	496.30	438.17
Clothing.....	538.17	271.55	519.90	500.03	376.43
Coffee and spice mills.....	785.60	723.12	500.00	597.56	922.65
Flour and feed.....	656.72	609.32	709.84	657.64	470.22
Furniture, not including chairs.....	400.69	370.21	467.67	366.64	338.84
Iron works, malleable.....	350.75	546.03	409.77	394.73	405.21
Lumber, laths, and shingles.....	334.84	524.12	532.29	348.25	341.10
Marble, cut stone.....	456.99	522.38	587.32	479.40	390.10
Paper and pulp.....	404.10	404.03	368.54	412.96	406.00
Plumbers' and gas-fitters' supplies.....				485.83	409.05
Printing, publishing, and bookbinding.....	518.09	441.14	447.09	455.97	476.82
Railway shops.....	509.14	525.93	569.12	496.51	536.28
Rolling mills.....	552.71	592.08	475.42	784.25	668.19
Sash, doors, and blinds.....	373.15	349.88	378.46	309.54	387.22
Textiles.....	314.14	269.06	253.62	230.18	276.92
Tobacco.....	453.21	455.77	426.24	324.48	542.60
Wagon stock.....				418.02	399.06
Wagons, carriages, etc.....	366.35	463.09	421.44	411.30	354.50
Windmills, tanks, and pumps.....	467.25	825.56	500.01	539.71	530.57

Comparisons are also made between the total wages and the number of employees in different industries in the city of Milwaukee and those in the state exclusive of the city.

An idea of the magnitude of the different industries in Milwaukee and in the state exclusive of the city may be obtained from the following statement, which shows the total for fifteen selected industries:

EMPLOYEES AND TOTAL WAGES IN FIFTEEN SELECTED INDUSTRIES IN MILWAUKEE AND IN WISCONSIN, 1893.

Industry.	Milwaukee.		State, exclusive of Milwaukee.	
	Employees.	Wages.	Employees.	Wages.
Agricultural implements.....	363	\$212,071	2,259	\$1,459,980
Beer and malt.....	3,678	1,926,289	654	542,001
Boots and shoes.....	1,680	427,532	1,777	823,662
Cigars.....	400	136,651	505	221,199
Clothing.....	1,065	547,527	1,028	239,661
Cut stone, marble.....	173	81,060	309	87,766
Flour and feed.....	457	257,616	1,572	560,567
Furniture, chairs.....	694	229,502	3,772	1,485,163
Iron works, foundries, and machine shops.....	2,976	1,641,811	2,054	883,370
Nails, tacks.....	489	154,100	179	64,862
Railway repair shops.....	208	115,640	5,737	3,129,262
Sash, doors, and blinds.....	1,305	541,910	2,481	1,311,354
Tobacco.....	313	125,843		
Wagons, carriages, and sleighs.....	430	147,941	2,758	900,694
Woolens and worsteds.....	1,020	205,212	1,458	530,201

The percentages of employees at stated daily rates of wages in factories, in 1893, are shown for the state, and on examining the total representing 102,865 employees, it is found that 48.55 per cent received \$1.25 and under \$2 per day, while but 1.47 per cent received \$3.50 and under \$4 per day. The results are summarized so as to permit of a ready comparison of the relative number at each rate in the different industries.

The amount of loss by fire in factories for each industry from 1885 to 1893, inclusive, is also shown.

FACTORY INSPECTION.—The report headed “Synoptical report of and orders issued by inspectors of factories and workshops” is full of interesting detail concerning the different factories inspected. It gives the description and value of each building, with the number of male and female employees. The summary table shows for each industry the value of new factory buildings, also the value of new machinery added, for 1891-92 and 1893-94, respectively. The totals for 1893-94 are also shown by localities, and the orders of the inspectors for repairs or additions are given in full.

REPORT BY MISS COLLET ON THE STATISTICS OF EMPLOYMENT OF WOMEN AND GIRLS IN ENGLAND AND WALES.

This report of 152 pages, prepared for the labor department of the British Board of Trade, gives statistics bearing on the employment of females in England and Wales, based principally on the following sources of information:

1. Returns made to the labor department in 1894 by cotton, woolen, and worsted manufacturers as to the employment of married women in their mills—specially procured for this report.

2. The statistics of occupations of women and girls at different ages in urban sanitary districts with over 50,000 inhabitants—compiled from the census sheets.

3. The published returns of inquiries recently conducted on the required scale and according to uniform methods—to be found in the census returns of occupations in 1891, and in the board of trade returns of rates of wages in textile trades in 1886.

The report is divided into three parts, dealing, respectively, with census returns of occupations in 1891, labor department returns of the employment of married women in 1894, and board of trade returns of rates of wages in the cotton, woolen, and worsted industries in 1886.

In Part I the census returns of the employment of women and girls in 1891 are compared with those for 1881. In making comparison the increase of population has been taken into account, the numbers of working females being expressed in ratios of the female population over 10 years of age, and these numbers are brought into comparison with the numbers of working males in the same occupations, expressed in similar ratios of the male population.

In Part II statistics from employers in the cotton, woolen, and worsted industries are given, showing the number and proportion of females employed in their mills who in 1894 were married or widowed, and the summarized results are compared with those of the census, as far as possible, with a view to testing their accuracy.

In Part III the broad results of the board of trade rates of wages returns for 1886 are summarized so far as they relate to the employment of women and girls in the cotton, woolen, and worsted industries in England, and an attempt is made to discover whether there is any indication of a relation between the rates of wages and the employment of married women.

The census statistics, presented in Part I of the report, show that more than four-fifths of the working females reported in 1891 were employed in 18 classes or groups of occupations, there having been 349

such classes. Less than 1 per cent of the working females were employed in each of the remaining classes or groups of occupations, and the total number employed in the 331 classes was only 67 per 1,000 of the total female population over 10 years of age.

The following table, derived from tables in Part I, shows the number of working females per 10,000 females 10 years of age and over engaged in each of the 18 classes of occupations referred to above, in each of which upward of 1 per cent of the total number of working females were employed in either 1891 or 1881, and the number of working females per 10,000 females 10 years of age and over employed in the remaining 331 classes of occupations, in each of which less than 1 per cent of the total number of working females were employed. It also shows the number of working females in 1891, at certain age periods, per 10,000 females at such periods, by occupations, and the decennial increases or decreases in the numbers employed:

WORKING FEMALES IN 1891 AT CERTAIN AGE PERIODS PER 10,000 FEMALES AT SUCH PERIODS.

Occupation.	10 and under 15 years.			15 and under 25 years.			25 and under 45 years.		
	Number.	Compared with 1881.		Number.	Compared with 1881.		Number.	Compared with 1881.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Employing more than 1 per cent of females who work:									
Domestic servants.....	665	.....	37	2,744	.....	189	902	57	.....
Milliners, dressmakers, and staymakers	108	41	.....	732	90	.....	331	.....	40
Cotton goods operatives	305	27	.....	555	.....	25	258	.....	22
Laundry and bath employees.....	11	2	.....	130	17	.....	164	.....	21
School teachers, professors, and lecturers...	37	.....	.....	245	.....	5	137	16	.....
Charwomen	2	1	.....	24	2	.....	102	2	.....
Tailoresses	32	20	.....	148	64	.....	66	11	.....
Worsted goods operatives	87	9	.....	117	.....	7	45	.....	7
Woolen goods operatives	32	1	.....	106	.....	14	51	.....	3
Nurses, midwives, etc. ....	.....	.....	.....	18	14	.....	48	25	.....
Shirtmakers and seamstresses	8	.....	3	45	.....	47	39	.....	40
Shoe, boot, patten, and clog makers (a).....	28	11	.....	83	16	.....	33	.....	.....
Drapers and mercers.....	8	4	.....	91	24	.....	35	11	.....
Grocers and chocolate makers and dealers..	6	3	.....	31	11	.....	38	14	.....
Boarding and lodging house keepers.....	.....	.....	.....	4	.....	.....	38	9	.....
Hotel servants	5	.....	.....	93	24	.....	35	13	.....
Silk, satin, velvet, and ribbon factory operatives	23	.....	3	46	.....	19	23	.....	12
Farm laborers and servants.....	8	.....	7	30	.....	31	18	.....	13
Total.....	1,365	69	.....	5,242	.....	75	2,363	.....	.....
Employing under 1 per cent of females who work.....	261	51	.....	1,094	197	.....	597	60	.....
Total.....	1,626	120	.....	6,336	122	.....	2,960	60	.....
Total female population...	1,612,709	214,608	.....	2,884,756	389,921	.....	4,006,447	511,665	.....

a Dealers, who were included in the census returns for 1881, were not included in those for 1891.

WORKING FEMALES IN 1891 AT CERTAIN AGE PERIODS PER 10,000 FEMALES AT SUCH PERIODS—Concluded.

Occupation.	45 and under 65 years.			65 years and over.			All ages over 10 years.		
	Number.	Compared with 1881.		Number.	Compared with 1881.		Number.	Compared with 1881.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Employing more than 1 per cent of females who work:									
Domestic servants.....	479	26	.....	276	19	.....	1,209	.....	22
Milliners, dressmakers, and staymakers.....	218	.....	47	94	.....	16	363	5	.....
Cotton goods operatives.....	87	.....	14	13	.....	5	290	.....	13
Laundry and bath employees.....	297	.....	44	200	.....	43	162	.....	15
School teachers, professors, and lecturers....	53	.....	5	16	.....	13	126	3	.....
Charwomen.....	213	.....	2	129	.....	23	92	.....	.....
Tailoresses.....	58	8	.....	30	4	.....	78	25	.....
Worsted goods operatives.....	16	.....	4	3	.....	.....	61	.....	3
Woolen goods operatives.....	21	.....	4	5	.....	4	54	.....	5
Nurses, midwives, etc.	102	.....	4	93	.....	31	47	9	.....
Shirtmakers and seamstresses.....	73	.....	37	93	.....	31	46	.....	a 36
Shoe, boot, patten, and clog makers (b).....	17	.....	5	9	.....	3	40	4	.....
Drapers and mercers....	19	6	.....	9	2	.....	40	11	.....
Grocers and chocolate makers and dealers..	73	23	.....	63	14	.....	40	14	.....
Boarding and lodging house keepers.....	102	16	.....	81	5	.....	39	6	.....
Hotel servants.....	10	6	.....	2	1	.....	39	13	.....
Silk, satin, velvet, and ribbon factory operatives.....	21	.....	16	13	.....	12	28	.....	a 13
Farm laborers and servants.....	26	.....	21	19	.....	25	21	.....	a 19
Total.....	1,885	.....	118	1,148	.....	161	2,775	.....	36
Employing under 1 per cent of females who work....	612	7	.....	450	.....	69	667	73	.....
Total.....	2,497	.....	111	1,598	.....	230	3,442	37	.....
Total female population...	2,191,964	240,251	.....	766,014	112,932	.....	11,461,890	1,469,377	.....

a An actual decrease as well as a relative one.

b Dealers, who were included in the census returns for 1881, were not included in those for 1891.

The decrease in the numbers employed in occupations connected with the textile industries is shown at every age period above 15 years.

The increase in the number of laundry and bath employees 15 and under 25 years of age is explained by the statement that laundry work in steam laundries attracts girls and young women more than was the case under the hand system.

The numbers employed as teachers, professors, and lecturers, and as nurses, midwives, etc., show an increase at the most efficient age periods, which, it is said, indicates an advance in the quality of their work.

A large decrease is shown, at every age period, in the number of shirtmakers and seamstresses. The report says that the decrease in these occupations would have been still more marked in the number employed who were 15 and under 25 years of age were it not for the

growth of the factory system in the manufacture of shirts and under-clothing; and to the factory system, and the consequent growth of the ready-made clothing trade, must be traced the great increase in the number of tailoresses.

The foregoing table shows that in 9 of the 18 specified occupations in each of which over 1 per cent of the working females were employed in 1891 or 1881 the employment of females increased relatively to population; these 9 occupations in 1891 employed 812 in every 10,000 females 10 years of age and over, or 90 more than in 1881. The other 9 specified occupations in 1891 employed 1,963 females in every 10,000 of 10 years of age and over, or 126 less than in 1881.

In the remaining occupations, in each of which less than 1 per cent of the working females were employed, 667 females per 10,000 of 10 years of age and over were employed in 1891, or 73 more than in 1881.

A striking fact shown by this table is the decrease in the proportion of females between the ages of 15 and 25 employed in domestic service, and the increase in the number so employed above the age of 25. The decrease is said to be due to a probably diminished supply of young servants; and the consequent improved condition of older servants accounts for the increase in their number. It is also said that as the proportion of children under 10 years of age and the proportion of married to single persons in 1891 were less than in 1881, the need for servants had to some extent diminished.

In order to compare the rate of progress in the employment of females with that of males in certain occupations employing both sexes the following table is given, showing the numbers of working males in 1891, at certain age periods, per 10,000 males at such periods, in the selected occupations, and the increase or decrease in the number employed in each occupation since 1881.

WORKING MALES IN 1891 AT CERTAIN AGE PERIODS PER 10,000 MALES AT SUCH PERIODS, IN OCCUPATIONS LARGELY FOLLOWED BY WOMEN.

Occupation.	10 and under 15 years.			15 and under 25 years.			25 and under 45 years.		
	Num-ber.	Compared with 1881.		Num-ber.	Compared with 1881.		Num-ber.	Compared with 1881.	
		In-crease.	De-crease.		In-crease.	De-crease.		In-crease.	De-crease.
Cotton goods operatives...	225	22	.....	277	.....	.....	195	8	.....
Worsted goods operatives..	66	10	.....	45	.....	2	31	.....	.....
Woolen goods operatives...	35	2	.....	75	2	.....	59	.....	3
Silk, satin, velvet, and rib- bon factory operatives...	12	1	.....	15	.....	2	13	.....	3
Tailors	20	7	.....	120	18	.....	128	.....	1
Shoe, boot, patten, and clog makers	58	21	.....	201	21	.....	199	.....	23
Drapers	11	1	.....	94	1	.....	64	.....	3
Hotel servants	7	.....	.....	81	7	.....	51	8	.....
School teachers, professors, and lecturers	10	.....	3	62	.....	25	66	13	.....
Farm laborers and serv- ants, teamsters, etc....	402	.....	76	860	.....	200	589	.....	127

WORKING MALES IN 1891 AT CERTAIN AGE PERIODS PER 10,000 MALES AT SUCH PERIODS, IN OCCUPATIONS LARGELY FOLLOWED BY WOMEN—Concluded.

Occupation.	45 and under 65 years.			65 years and over.		
	Num-ber.	Compared with 1881.		Num-ber.	Compared with 1881.	
		In-crease.	De-crease.		In-crease.	De-crease.
Cotton goods operatives.....	135	.....	14	51	.....	26
Worsted goods operatives.....	26	.....	4	14	.....	6
Woolen goods operatives.....	59	.....	9	38	.....	21
Silk, satin, velvet, and ribbon factory operatives...	20	.....	12	24	.....	20
Tailors	141	.....	35	143	.....	21
Shoe, boot, patten, and clog makers.....	256	.....	43	245	.....	47
Drapers.....	45	4	.....	19	.....	.....
Hotel servants.....	20	3	.....	7	.....	.....
School teachers, professors, and lecturers.....	37	5	.....	12	.....	4
Farm laborers and servants, teamsters, etc.....	809	.....	250	990	.....	320

In four occupations employing females and males the former have made distinct advances; in one of these, hotel servants, the number of males also show an advance; in another, drapers, the number of male employees 25 and under 45 years of age show a decrease; in the other two, tailors and shoemakers, boys and youths show an increase. The decrease in the last two occupations in the numbers employed at the age periods above the 15-25 period is said to be probably due to changes in the organization of the trades to which these occupations belong, and the decrease in the number of males 25 and under 45 years of age in the shoe trade is partly due to the exclusion of dealers in the census returns for 1891, who were included in those for 1881. A decrease in the numbers of both sexes employed as farm laborers and servants, teamsters, etc., is shown at every age period.

There was a remarkable increase in the employment of children of both sexes under the age of 15 years. It is suggested that the increase shown by the census of 1891 over the number as reported by the census of 1881 may be partly due to concealment of employment of children in 1881. As to the employment of female children, the increase seems to be attributable to the growth of urban population, such increase having occurred in counties containing one or more towns of over 50,000 inhabitants in which the population has increased at a higher rate than the urban population generally. This inference is supported by the fact that the increase in the employment of girls under 15 years of age was greatest in industries in which the chances of employment are much greater in towns than in rural districts, in several branches of which the extended use of machinery and the minute subdivision of labor render it easier for children to find work than formerly.

In the table giving the employment of females at certain age periods it is shown that in every 10,000 females 10 and under 15 years of age 1,626 were employed, equivalent to 16.26 per cent. The census returns for 1891 show that in 34 towns, including London, with over 50,000 inhabitants each, the percentage was lower than this, ranging in the

different towns from 6.2 to 16 per cent, while in 28 towns of over 50,000 population the percentage was higher, ranging from 17 to 58.1 per cent.

The age period at which the largest percentage of females is employed is that from 15 to 20 years. The census of 1891 shows that in England and Wales 68.6 per cent of females between these ages were employed in the various occupations. In 30 towns each with a population of upward of 50,000 the percentage was lower than this, ranging from 49.2 to 67.1 per cent, while in 32 towns each having populations of over 50,000 the percentage was higher, ranging from 68.8 to 95.3 per cent.

In discussing the employment of women over 20 years of age, with special reference to married and widowed women, the report says that the age period between 20 and 25 years is that at which the female worker has, perhaps, the most industrial freedom; she is then not only in her prime industrially, but generally has the option of exchanging wage-earning employment for domestic life. In England and Wales 70 per cent of the females at this age period were returned as unmarried; but the large towns showed considerable divergence from this average, the percentages ranging from 41 to 85.

Tables are given showing the percentages of working married and widowed females at different age periods in 19 industrial towns in England in 1891 and 1881, and the inference is drawn that in these towns, most affected by female labor, to which the tables relate, the percentage of working married women is diminishing. It is mentioned as a noteworthy fact that in all these factory centers there is a marked diminution in the proportion of working married women between the ages of 20 and 25 years.

The conditions governing married female labor in the north of England are quite different from those in the south. In the north there has been a large demand for female labor, and married women have been attracted by the high wages obtainable in the textile industries, especially in the cotton trade. The women of the north have not regarded industrial employment as being merely a means of support prior to marriage, but have looked upon it, more than upon domestic management, as their life occupation, and they work with a view to saving or for greater comfort in living. These causes tend to make them efficient workers and to develop industrial ambition.

In the south of England, where the factory industries are small and a large proportion of female employment is in domestic service, working girls look forward to marriage as a release from wage-earning employment, and in the upper industrial classes marriage usually gives such release. The girl before marriage rarely aims at becoming a very efficient worker, and if in later life she finds it necessary to again support herself she is unable to gain employment except in ordinary domestic service. In the lower industrial grades females frequently remain at work after marriage because of the small earnings or irreg-

ular employment of their husbands. The effect of these conditions on the quality of female labor is disadvantageous, and the married female labor is of a poor kind.

Part II of the report deals with statistics collected by the labor department from manufacturers in 1894, relative to unmarried, married, and widowed females employed by them in cotton, woolen, and worsted mills in Lancashire, Cheshire, Yorkshire, and the west of England. Returns were received from 1,654 manufacturers, of whom 968 were in the cotton industry, 315 in the woolen, 340 in the worsted, and 31 in the mixed woolen and worsted. These returns relate to the employment of 246,825 females, distributed among the industries as follows: Cotton, 176,456; woolen, 20,045; worsted, 46,540; mixed woolen and worsted, 3,784.

The females employed in the cotton and other industries, to whom the labor department statistics relate, are classified as "half-timers," who were 11 and under 13 years of age; as "young persons," who were 13 and under 18 years of age, and as "women 18 years of age and over." This classification is in accordance with the terms of the English factory act, which defines the terms "half-timer," "young person," and "women" in such a manner as to include all females legally employed in factories under these headings.

In the cotton industry 12,536 of the 176,456 females employed, or 7.1 per cent, were half-timers; 45,398, or 25.7 per cent, were young persons; 118,522, or 67.2 per cent, were women 18 years of age and over. Of the 118,522 women, 38,991, or 32.9 per cent, were either wives or widows; the ratio of married and widowed to the total number of females, exclusive of half-timers, was 23.8 per cent, or nearly one-fourth; of the total number of females, including half-timers, 22.1 per cent, or more than one-fifth, were married or widowed; of the 38,991 women who were married or widowed, 4,841, or 12.4 per cent, were widowed.

Great differences exist in the percentages in different localities; for example, in 10 urban sanitary districts each with over 50,000 inhabitants the percentages of women over the age of 18 who were married or widowed ranged from 9.8 to 44.7 per cent.

In the woolen industry the statistics show that of the 20,045 females to whom they relate, 200, or 1 per cent, were half-timers; 3,364, or 16.8 per cent, were young persons, and 16,481, or 82.2 per cent, were women 18 years of age and over. Of the 16,481 women, 4,906, or 29.8 per cent, were either married or widowed. The ratio of married and widowed to the total number of females, exclusive of half-timers, was 24.7 per cent, or about one-fourth.

The relative number of half-timers reported in this industry was so small that the ratio of wives and widows to the total number of working females was nearly the same as their ratio to the total number exclusive of half-timers, being 24.5 per cent. Of the 4,906 woolen operatives

reported as married or widowed, 844, or 17.2 per cent, were reported as widowed.

In the worsted industry 3,944, or 8.5 per cent, of the 46,540 working females were half-timers; 13,288, or 28.5 per cent, were young persons, and 29,308, or 63 per cent, were women 18 years of age and over. Of the 29,308 women, 6,269, or 21.4 per cent, were either married or widowed. The ratio of married and widowed to the total number of working females, exclusive of half-timers, was 14.7 per cent, or slightly more than one-seventh; the ratio of married and widowed to the total number of working females, inclusive of half-timers, was 13.5 per cent, or nearly one-seventh. Of the 6,269 wives and widows, 1,111, or 17.7 per cent, were widows.

In the mixed woolen and worsted industry 83, or 2.2 per cent, of the 3,784 female operatives were half-timers; 792, or 20.9 per cent, were young persons, and 2,909, or 76.9 per cent, were women 18 years of age and over. Of the 2,909 women, 686, or 23.6 per cent, were either married or widowed. The ratio of the married and widowed to the total number of working females, exclusive of half-timers, was 18.5 per cent, and to the total number, inclusive of half-timers, 18.1 per cent. Of the 686 wives and widows, 108, or 15.7 per cent, were widows.

The total number of females in all the industries to which the statistics relate was 246,825. Of this number 16,763, or 6.8 per cent, were half-timers; 62,842, or 25.5 per cent, were young persons, and 167,220, or 67.7 per cent, were women 18 years of age and over. Of the 167,220 women, 50,852, or 30.4 per cent, were either married or widowed. The ratio of the married and widowed to the total number of working females, exclusive of half-timers, was 22.1 per cent, and to the total number, inclusive of half-timers, 20.6 per cent. Of the 50,852 wives and widows, 6,904, or 13.6 per cent, were widows.

The following statement shows the number of working females, by industries, concerning whom statistics were gathered by the labor department in 1894, classified as "half-timers," those 11 and under 13 years of age; "young persons," those 13 and under 18 years of age, and "women 18 years of age and over," of whom the number unmarried, married, and widowed are given. The percentage that each class is of the total number of working females in each industry is also given.

WORKING FEMALES IN CERTAIN INDUSTRIES, 1894.

Working females.	Cotton.		Woolen.		Worsted.		Mixed woolen and worsted.		Total.	
	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.
Under 18 years of age:										
Half-timers.....	12,536	7.1	200	1.0	3,944	8.5	83	2.2	16,763	6.8
Young persons	45,398	25.7	3,364	16.8	13,288	28.5	792	20.9	62,842	25.5
Total	57,934	32.8	3,564	17.8	17,232	37.0	875	23.1	79,605	32.3
18 years of age and over:										
Unmarried	79,531	45.1	11,575	57.7	23,039	49.5	2,223	58.8	116,368	47.1
Married	34,150	19.4	4,062	20.3	5,158	11.1	578	15.3	43,948	17.8
Widowed.....	4,841	2.7	844	4.2	1,111	2.4	108	2.8	6,904	2.8
Total, married and widowed..	38,991	22.1	4,906	24.5	6,269	13.5	686	18.1	50,852	20.6
Total, 18 years of age and over...	118,522	67.2	16,481	82.2	29,308	63.0	2,909	76.9	167,220	67.7
Grand total.....	176,456	100.0	20,045	100.0	46,540	100.0	3,784	100.0	246,825	100.0

Part III of the report presents statistics relating to female labor at the principal centers of the cotton, woolen, and worsted industries in England, taken from the Board of Trade Return of Rates of Wages in the Principal Textile Trades in the United Kingdom.

Owing to the vagueness of the distinction made by employers between women and girls, working females are classified as "half-timers" and "full-timers," no attempt being made to distinguish between "women" and "young persons."

The wages covered by the statistics were the average wages for a week in October, 1886. These are shown to have been \$3.51 for 67,843 females working full time in the cotton manufacture in Lancashire and Cheshire; \$3.20 for 10,909 females working full time in the woolen manufacture in Yorkshire and Lancashire; \$2.78 for 18,855 females working full time in the worsted and stuff manufacture in Yorkshire; \$2.60 for 1,757 females working full time in the woolen manufacture in the west of England.

The following statement shows the number and per cent of females working full time, above referred to, in the industries specified, at and between different weekly wage rates:

FEMALES WORKING FULL TIME IN CERTAIN INDUSTRIES AT AND BETWEEN CERTAIN WEEKLY WAGE RATES, 1886.

Industry.	Under \$2.43.		\$2.43 and under \$3.65.		\$3.65 and under \$4.87.		\$4.87 and under \$6.08.		\$6.08 and over.		Total.	
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.
Cotton (a)....	7, 245	10. 7	30, 482	44. 9	21, 708	32. 0	8, 216	12. 1	192	0. 3	67, 843	100
Woolen (b)...	1, 159	10. 6	6, 973	64. 6	2, 767	25. 3	10	. 1	.....	.....	10, 909	100
Woolen (c)...	796	45. 3	961	54. 7	.....	.....	.....	.....	.....	.....	1, 757	100
Total	1, 955	15. 4	7, 934	62. 6	2, 767	21. 9	10	. 1	.....	.....	12, 666	100
Worsted and stuff (d)....	6, 902	36. 6	11, 838	62. 8	115	. 6	.....	.....	.....	.....	18, 855	100
Grand total	16, 102	16. 2	50, 254	50. 6	24, 590	24. 7	8, 226	8. 3	192	. 2	99, 364	100

a In Lancashire and Cheshire.

b In Yorkshire and Lancashire.

c In west of England.

d In Yorkshire.

The board of trade statistics for 1886 are considered in connection with those collected by the labor department in 1894. From the latter it appears that in 1894 the proportion of young persons to women was considerably higher in worsted than in cotton mills, 31.2 per cent of the full-timers being young persons in the former case and 27.7 per cent in the latter. Moreover, only 21.4 per cent of the adult females in the worsted mills were married or widowed, as compared with 32.9 per cent in the cotton mills. Supposing somewhat similar conditions to have prevailed in 1886 as in 1894, it would follow that the average age of the cotton operatives was higher than that of the worsted operatives. Making all allowance for such difference in age, it would seem that the average wages were lower in the worsted than in the cotton industry.

The change that has taken place in the woolen manufacture since 1886 makes it most unlikely that the proportion of young persons to adult women employed in 1894 approximated to that prevailing in 1886. The proportion of adult females in woolen mills was abnormally high in 1894, having been 83 per cent of full-timers, as compared with 72.3 per cent in the cotton mills. This high proportion of adult females was most probably due to the employment of girls in worsted instead of in woolen mills. Notwithstanding the high proportion of adult females, the percentage of females either married or widowed in the Yorkshire woolen mills was less than the percentage in the cotton mills, having been 28.1 per cent in the former case and 32.9 per cent in the latter. In 1886, before the stream of young workers was diverted from the woolen to the worsted cloth manufacture, the percentage of married females was probably lower still.

Comparing the three industries, it was found that the higher average of wages coincide with a higher percentage of adult females either married or widowed. Comparing estimated average wages of young persons in the cotton and worsted mills, the average in the worsted mills was considerably lower than in the cotton mills, although the average age of young persons would be about the same.

An examination of the relation between average wages and the percentage of married women employed in cotton mills in different districts pointed to the conclusion that in the north of England one of the causes of an exceptionally high rate of employment of married women was the high rate of wages that could be earned. In so far as this conclusion is correct, it may be inferred that a falling in wages of working females in the great textile trades would be followed by a diminution in the employment of married women, if the wages of male operatives remained unchanged.

With the relation between wages and the employment of married women in the north of England must be compared the conditions found in the woolen mills in the west of England, where the average weekly wage in 1886 was much lower than the average in Yorkshire and Lancashire, but where the percentage of working females who were either married or widowed was extremely high in 1894.

In conclusion, it is said that the current view that the employment of female labor is rapidly extending, and that women are replacing men to a considerable extent in industrial occupations, is not confirmed. On the whole, the proportion of working females remained practically stationary in the decade 1881-1891, there having been 34.05 working females over 10 years of age per 100 in 1881 and 34.42 per 100 in 1891, the slight increase being attributed to the increased number of females under 25 years of age with definite occupations, and to the increased employment of middle-class women.

The employment of married and elderly women has, on the whole, diminished, as has also the employment of women in casual occupations. There has been an increase in the employment of females under the age of 25 years, which has, however, been concurrent with a similar extension in the employment of young men and boys.

As to the substitution of female for male labor, the census returns show that 83.24 per cent of males over 10 years of age were industrially employed in 1881 and 83.10 per cent in 1891. In either year there were less than 17 males in every 100 who could possibly have been added to the ranks of the employed, whereas there were nearly 66 females in every 100 upon which to draw for an increase in wage earners, yet in 1891 this available female surplus had only been diminished by less than 1, and it appears to be clearly shown that male labor has not been displaced to any marked extent by the employment of females.

EMPLOYER AND EMPLOYEE UNDER THE COMMON LAW.

BY VICTOR H. OLMSTED AND STEPHEN D. FESSENDEN.

The relations existing between employers of labor and their employees, and the reciprocal duties, obligations, and rights growing out of those relations, are, in the absence of legislative enactments, governed by the common law in regard to master and servant, the words master and servant being legally synonymous with the words employer and employee.

The common law consists of principles, usages, and rules of action, applicable to the government and security of persons and property, which have grown into use by gradual adoption, without legislative authority, and have received, from time to time, the sanction of the courts of justice.

The great body of the common law of the United States consists of the common law of England, and such statutes thereof as were in force prior to the separation of this country from England, and applicable to circumstances and conditions prevailing here. These laws have been adopted as the basis of our jurisprudence in all the states except Louisiana, and many of the most valued principles of the English common law have been embodied in the constitutions of the United States and the several states.

In many details, however, the common law of the United States now differs widely from that of England by reason of modifications arising from different conditions and established by American adjudications. That branch of the common law governing the relation of master and servant has undergone some changes, although in the main it is the same in this country as in England. It is not the purpose of this article to point out such changes or differences, but to state the principles and rules of the common law now prevailing throughout the United States, except where they have been changed or modified by legislative enactments.

The statement which follows is derived from articles in the American and English Encyclopedia of Law on the subject of "Master and servant" and kindred topics, and from standard legal works treating of the subject under consideration. The reader should bear in mind that any rule or principle of the common law, as given in this statement, conflicting with a statute which has not been declared invalid or unconstitutional by the courts, is modified or changed by the statute, and that the statute instead of the common law now governs.

MASTER AND SERVANT: DEFINITIONS.—A master is variously defined as one who has in his employment one or more persons hired by contract to serve him either as domestic or common laborers; one who has the superior choice, control, and direction, whose will is represented not merely in the ultimate result of the work in hand, but in all its details; one who is the responsible head of a given industry; one who not only prescribes the end, but directs, or may at any time direct the means and methods of doing the work; one who has the power to discharge; a head or chief; an employer; a director; a governor.

A servant is one who is employed to render personal service to his employer otherwise than in the pursuit of an independent calling, and who, in such service, remains entirely under the control and direction of the latter.

THE RELATION: ITS CREATION AND EXISTENCE.—The relation of master and servant is created by contract, either express or implied, where both parties have the requisite legal qualifications for entering into a valid contract. The relation exists only where the person sought to be charged as master employs and controls the other party to the contract of service, or expressly or tacitly assents to the rendition of the particular service by him. The master must have the right to direct the action of the servant, and to accept or reject his service. The relation does not cease so long as the master retains his control or right of control over the methods and manner of doing the work, or the agencies by which it is effected. Furthermore, the relation exists where the servant is employed, not by the master directly, but by an employee in charge of a part of the master's business with authority to engage assistance therein.

THE CONTRACT OF SERVICE.—A contract of employment is one by which an employer engages an employee to do something for the benefit of the employer, or of a third person, for a sufficient consideration, expressed or implied. The authority of a subordinate to employ an agent or servant includes, in the absence of restrictive words, authority to make a complete contract, definite as to the amount of wages, as well as to all other terms.

Ordinarily, when an adult person solicits employment in a particular line of work, the solicitation carries with it an implied assertion that the one seeking employment is competent to perform the ordinary duties of the position sought; and it is an implied condition of every contract of service that the employee is competent to discharge the duties of his employment.

A servant is presumed to have been hired for such length of time as the parties adopt for the estimation of wages; for example, a hiring at a yearly rate is presumed to be for one year; at a daily rate, for one day; a hiring by piecework, for no specified time; but such fact does not, in the absence of other evidence, necessarily fix the period of hiring. Where an employee has been hired to work by the week or month, the

burden of proof is upon him to show any change in the contract of employment as to the term of service.

It is a general rule that where a person enters into a contract of service for a fixed compensation, he, *prima facie*, agrees to give his employer his entire time; but this rule is not inflexible.

A contract for service running for a longer period of time than one year, to be valid, must be in writing and signed by the party against whom it may be sought to be enforced, or by his authorized agent.

In the absence of an express contract of hiring, a person may recover compensation for services where the same were rendered under such circumstances as to show that he expected such compensation as a matter of right, and that the person for whom they were rendered was bound to know that he claimed compensation, or was legally entitled thereto. Where one person performs labor for another, a request and a promise to pay the reasonable worth of such labor are presumed by law, unless it is understood that the labor is to be gratuitously performed, or it is performed under such circumstances as to repel the presumption of a promise to pay.

Where there is an express contract the servant must be furnished with employment by the master during the period covered by its terms. If by the terms of the contract the servant is employed to work by the day, week, month, or year, and nothing is said as to the time of payment for his services, the wages are due and may be demanded at the close of each day, week, month, or year, as the case may be; but in such case, as upon all questions relating to the interpretation of contracts, custom has a strong bearing.

A man can contract to furnish his own services and those of his wife, and if she makes no separate claim can sue for them; and if such contract needs ratifying, the testimony of the wife in support of his demand will be a sufficient ratification.

A wife is not responsible for the wages of her husband's employee, notwithstanding the fact that she sometimes pays such wages.

When a master agrees to pay his servant what he considers the servant's services to be reasonably worth, or, where he agrees to pay the same wages as shall be paid to other men in his employ filling similar positions, and there is no showing that the master has other employees in similar positions, the servant is entitled to recover, in a suit for wages, what his services were actually worth. And where the master and servant agree as to the existence of the contract of service, but disagree as to the wages to be paid, the question of compensation must be left to a jury.

Unless otherwise agreed, the wages of an employee must be paid in cash. The master has no right to handle, or invest, or in any manner apply such wages, whether beneficial to the servant or not, but must pay them directly to him.

An employer may discharge an employee before the expiration of the term of service stipulated in the contract for good and sufficient cause, as, for incompetency. The discharge must be couched in such terms as to leave no doubt in the employee's mind of the employer's desire to terminate the relation.

In a majority of the states a contract for service for a specified time is considered apportionable, and an employee who has been discharged for cause is entitled to compensation for the work he has actually performed.

Where one has contracted to employ another for a certain period of time, at a specified price for the entire time, and discharges him wrongfully before the expiration thereof, the wrongfully discharged employee is entitled to recover an amount equal to the stipulated wages for the whole period covered by the contract, less the sum earned, or which might have been earned in other employment during the period covered by the breach. Upon dismissal a servant, under the law, must seek other employment, but extraordinary diligence in such seeking is not required of him. He is only required to use reasonable efforts, and he is not bound to seek employment or render service of a different kind or grade from that which he was engaged to perform under the violated contract, nor to seek employment in a different neighborhood; and if he fails to secure employment and works on his own account the value of such work can not be deducted from his claim.

Where an employee for a fixed period, at a salary for the period, payable at intervals, is wrongfully discharged, he may pursue one of four courses—

1. He may sue at once for the breach of contract, in which case he can only recover his damages up to the time of bringing the suit.

2. He may wait until the end of the contract period, and then sue for the breach.

3. He may treat the contract as existing, and sue at each period of payment for the wages then due.

4. He may treat the contract as rescinded, and sue immediately for the value of his services performed, in which case he can only recover for the time he actually served.

An employee is entitled to recover damages from a person who maliciously procures his discharge, provided he proves that the discharge resulted in damage to him.

An employer is entitled to maintain an action against anyone who knowingly entices away his servant, or wrongfully prevents the servant from performing his duty, or permits the servant to stay with him and harbors such servant with the intention of depriving the master of his services.

COMBINATIONS AND COERCION OF SERVANTS.—Everyone has the right to work or to refuse to work for whom and on what terms he pleases, or to refuse to deal with whom he pleases; and a number of

persons, if they have no unlawful object in view, have the right to agree that they will not work for or deal with certain persons, or that they will not work under a fixed price or without certain conditions.

The right of employees to refuse to work, either singly or in combination, except upon terms and conditions satisfactory to themselves, is balanced by the right of employers to refuse to engage the services of anyone for any reason they deem proper. The master may fix the wages, and other conditions not unlawful, upon which he will employ workmen, and has the right to refuse to employ them upon any other terms. In short, both employers and employees are entitled to exercise the fullest liberty in entering into contracts of service, and neither party can hold the other responsible for refusing to enter into such contracts.

It has been held, however, that employers in separate, independent establishments have no right to combine for the purpose of preventing workmen, who have incurred the hostility of one of them, from securing employment upon any terms, and by the method commonly known as blacklisting debarring such workmen from exercising their vocation, such a combination being regarded as a criminal conspiracy.

On the other hand, a combination of employees having for its purpose the accomplishment of an illegal object is unlawful; for instance, a conspiracy to extort money from an employer by inducing his workmen to leave him and deterring others from entering his service, is illegal; and an association which undertakes to coerce workmen to become members thereof or to dictate to employers as to the methods or terms upon which their business shall be conducted, by means of force, threats, or intimidation interfering with their traffic or lawful employment of other persons is, as to such purposes, an illegal combination.

Unlawful interference by employees, or former employees, or persons acting in sympathy with them, with the business of a railroad company in the hands of a receiver, renders the persons interfering liable to punishment for contempt of court.

EMPLOYER'S LIABILITY FOR INJURIES OF EMPLOYEES.—Where a person employs an independent contractor to do work for him, and retains or exercises no control over the means or methods by which the work is to be accomplished, he is not answerable for the wrongful acts of such contractor; and the same rule governs as between a contractor and a subcontractor. Under these circumstances an employer would not be liable for an injury sustained by a workman in the course of his employment for which he would have been liable had the work been performed under his own direction.

An employer is ordinarily liable in damages to his employee who sustains an injury through the employer's negligence. Such negligence may consist in the doing of something by the employer which, in the exercise of ordinary care and prudence, he ought not to have done, or in the omission of any duty or precaution which a prudent, careful man would or ought to have taken.

An employer can not avoid his liability to an employee for injuries sustained by the latter through his negligence by means of a contract with such employee which provides that in consideration of the employment he shall be exempt from such liability. Such a contract is against public policy and void. The supreme court of the state of Georgia has, however, sustained the validity of contracts of this character.

CONTRIBUTORY NEGLIGENCE BY EMPLOYEES.—It is a general rule that when an employee suffers an injury through the negligence of his employer he is not entitled to recover damages for such injury if his own negligence contributed thereto. Under this rule, where master and servant have equal knowledge of the danger of the service and the means of avoiding it, and the servant while engaged in the performance of his duties is injured by reason of his own inattention and negligence, the master is not liable; and where the servant is told to do a particular thing and is not directed as to the time or manner in which the work is to be done, it being left to his discretion, so that he is given some control over the means, time, and manner of doing it, he is guilty of contributory negligence if he does not use the safest means, time, and method of accomplishing the work and is injured while so engaged, and can not recover damages from the master; nor can he recover such damages if injured by the use of a defective appliance under his own exclusive care; nor where he had knowledge of a defect in an appliance used by him, through which he is injured, and failed to notify the master thereof, if no blame was imputable to the latter in failing to discover such defect, or in failing to furnish a safe and suitable appliance.

But an employee's right to recover damages for an injury is not affected by his having contributed thereto unless he was at fault in so contributing, and he may recover, notwithstanding his contributory negligence, if the master, after becoming aware of the danger, failed to exercise ordinary care to prevent the injury or willfully inflicted the damage.

When an employee in the course of his employment finds himself exposed to imminent peril due to the master's negligence, and in the terror of the moment adopts a course exposing him to greater peril and is injured, such action on his part does not constitute contributory negligence, and will not relieve the master from liability.

An employee is not guilty of contributory negligence if, when injured, he was exercising ordinary care to avoid injury, and discharging his duties in a careful and prudent manner, and the injury was sustained by reason of negligent failure on the part of the employer to exercise ordinary care for the employee's safety, as failure to warn the employee of extraneous risks and unusual dangers known to the employer but unknown to the employee, or to instruct an immature or inexperienced servant and warn him of the dangers attending his work not obvious to one of his capacity or experience; to provide suitable machinery,

tools, and appliances for carrying on the work at which the servant is employed; to inspect and repair machinery, tools, and appliances; to provide a safe place for the servant to work, the ordinary risks of the business excepted; to guard against a danger to a servant of which the master has been notified, or which he has promised to obviate, or which he has assured the servant did not exist; to make and promulgate proper rules and regulations for the conduct of the employment in which the servant is engaged; to employ and retain a sufficient number of competent and trustworthy servants to properly and safely carry on the business. The employee does not assume the risk of injury by reason of the negligent failure of his employer in fulfilling any of the duties incumbent upon him, and, as before stated, is not guilty of contributory negligence when injured by such failure, if he himself was without fault in the discharge of his duty.

Contributory negligence is purely a matter of defense in actions by employees for damages resulting from injuries sustained during the course of their employment, and the burden of proving it is upon the master who seeks thereby to avoid liability for such damages.

ASSUMPTION OF RISKS BY EMPLOYEES.—Where an employment is accompanied with risks of which those who enter it have, or are presumed to have, notice, they can not, if they are injured by exposure to such risks, recover compensation for the injuries from their employer; by contracting to perform hazardous duties the employee assumes such risks as are incident to their discharge, and he assumes not only the risks existing at the beginning of his employment, but also such as arise during its course, if he had or was bound to have knowledge thereof. He does not, however, assume the risk of dangers arising from unsafe or defective methods, machinery, or other instrumentalities, unless he has, or may be presumed to have, knowledge or notice thereof, and the burden of proving that an injured employee had such knowledge or notice of the defect or obstruction causing the injury is upon the employer.

The employee assumes all risk of latent defects in appliances or machinery, unless the master was negligent in not discovering the same; but the experience, or lack of experience, of the employee is to be considered in determining whether or not he is chargeable with knowledge of such defects as are not obvious and of the danger arising therefrom.

Another risk assumed by employees is that of the master's method of conducting his business. If the employee enters upon the service with knowledge of the risk attending the method, he can not hold the master responsible for injuries arising from the use of such method though a safer one might have been adopted; but in order to relieve the master from liability the method must amount to a custom or mode of carrying on the business, and not consist merely of an instance or any number of instances of culpable negligence on the part of the master.

An employer can not avoid his liability to an employee for injuries sustained by the latter through his negligence by means of a contract with such employee which provides that in consideration of the employment he shall be exempt from such liability. Such a contract is against public policy and void. The supreme court of the state of Georgia has, however, sustained the validity of contracts of this character.

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But an employee's right to recover damages for an injury is not affected by his having contributed thereto unless he was at fault in so contributing, and he may recover, notwithstanding his contributory negligence, if the master, after becoming aware of the danger, failed to exercise ordinary care to prevent the injury or willfully inflicted the damage.

When an employee in the course of his employment finds himself exposed to imminent peril due to the master's negligence, and in the terror of the moment adopts a course exposing him to greater peril and is injured, such action on his part does not constitute contributory negligence, and will not relieve the master from liability.

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tools, and appliances for carrying on the work at which the servant is employed; to inspect and repair machinery, tools, and appliances; to provide a safe place for the servant to work, the ordinary risks of the business excepted; to guard against a danger to a servant of which the master has been notified, or which he has promised to obviate, or which he has assured the servant did not exist; to make and promulgate proper rules and regulations for the conduct of the employment in which the servant is engaged; to employ and retain a sufficient number of competent and trustworthy servants to properly and safely carry on the business. The employee does not assume the risk of injury by reason of the negligent failure of his employer in fulfilling any of the duties incumbent upon him, and, as before stated, is not guilty of contributory negligence when injured by such failure, if he himself was without fault in the discharge of his duty.

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Another risk assumed by employees is that of the master's method of conducting his business. If the employee enters upon the service with knowledge of the risk attending the method, he can not hold the master responsible for injuries arising from the use of such method though a safer one might have been adopted; but in order to relieve the master from liability the method must amount to a custom or mode of carrying on the business, and not consist merely of an instance or any number of instances of culpable negligence on the part of the master.

NEGLIGENCE OF FELLOW-SERVANTS.—The general rule at common law is that he who engages in the employment of another for the performance of specified duties and services, for compensation, takes upon himself the natural and ordinary risks and perils incident to the performance of such services. The perils arising from the carelessness and negligence of those who are in the same employment are no exception to this rule, and where a master uses due diligence in the selection of competent, trusty servants and furnishes them with suitable means to perform the services in which he employs them, he is not answerable to one of them for an injury received in consequence of the carelessness or negligence of another, while both are engaged in the same service.

Various attempts have been made by judges and text writers to lay down some rule or formula by which to determine what servants of a common master may be said to be fellow-servants assuming the risk of each other's negligence. The following are well-known definitions:

Persons are fellow-servants where they are engaged in the same common pursuit under the same general control.

All who serve the same master, work under the same control, derive authority and compensation from the same common source, and are engaged in the same general business, though it may be in different grades or departments of it, are fellow-servants who take the risk of each other's negligence.

The true test of fellow-service is community in that which is the test of service; which is subjection to control and direction by the same common master in the same common pursuit. If servants are employed and paid by the same master, and their duties are such as to bring them into such a relation that the negligence of the one in doing his work may injure the other in the performance of his, then they are engaged in the same common pursuit, and being subject to the same control they are fellow-servants.

All servants in the employ of the same master, subject to the same general control, paid from a common fund, and engaged in promoting or accomplishing the same common object, are to be held fellow-servants in a common employment.

It is said that these definitions are faulty, and of little practical value by reason of their being stated so broadly and in such general and comprehensive terms, nevertheless they give a correct idea as to who have been determined by many courts to be fellow-servants within the rule exempting the master from liability for the negligence of one of them resulting injuriously to another.

The principal limitation contended for on the general rule in regard to fellow-servants is that there is such a servant as vice-principal, who takes the place of the master and is not a fellow-servant with those beneath him; and there is a variation of this idea to the effect that every superior servant is a vice-principal as to those beneath him. The doctrine of vice-principal is, however, repudiated by the courts of many of the states.

The master, as such, is required to perform certain duties which have been hereinbefore specified, and the person who discharges any of these duties, no matter what his rank or grade, no matter by what name he may be designated, can not be a servant within the meaning of the general rule on fellow-servants. The liability of the master for the nonperformance of such duties as the law implies from the contract of service, does not rest upon the ground of guarantee of their performance, but upon the fact of the presence or absence of negligence of the master in their performance.

Whether one is acting as the representative of the master or merely as the fellow-servant with others employed by the same master, does not depend upon his rank or title, but upon the character of the duties he is performing at the time another servant is injured through his negligence; if at such time the offending servant was in the performance of a duty which the master owed his servants, he was not a fellow-servant with the one injured, but a vice-principal, for the rule is fundamental that a master can not rid himself of a duty he owes to his servants by delegating his authority to another and thus escape responsibility for negligence in the performance of such duty.

If, however, at the time of the injury the negligent servant was not engaged in the performance of duty due from the master to his servants, but was discharging a duty which was due from the servant to the master, he was a fellow-servant to the one injured, engaged in the same common business, and the master would not be liable for the injuries sustained by reason of his negligence.

It is held by the courts of some of the states that, as industrial enterprises have grown, and, because of the division of labor and the magnitude of operations, have been divided into distinct and separate departments, a laborer in one department is not a fellow-servant with a laborer in another and separate department of the same establishment.

INCOMPETENCY OF FELLOW-SERVANTS.—If an employer knowingly employs or retains an incompetent servant he is liable for an injury to a fellow-servant sustained through the incompetency of the servant so employed or retained, provided the injured servant did not know and had not the means of knowing the incompetency of his fellow-servant. A master is not, however, liable for injuries to one servant by the negligence of another on the ground of unskillfulness of the latter unless the injuries were caused by such unskillfulness.

A master does not warrant the competency of his servants, but must use all ordinary care and diligence in their selection and retention. If he has not been negligent in selecting a servant, and subsequently obtains knowledge of the servant's incompetence and still retains him, he is liable to another servant for any injury resulting from said

incompetence. If the employer had no actual notice of the servant's incompetence, if it was notorious and of such a character that with proper care he would have known of it, he will still be liable.

If a person, knowing the hazards of his employment as it is conducted, voluntarily continues therein without any promise by the master to do any act to render the same less hazardous, the master will not be liable for an injury he may sustain therein, unless it is caused by the willful act of the master. No servant is entitled to damages resulting from the incompetence of a fellow-servant when he knew of such incompetence and did not inform his employer of the same.

When it is alleged that the master has been guilty of selecting or retaining an incompetent servant, the burden of proof of said allegation is on the plaintiff. Neither incompetency nor unskillfulness will be presumed; they must be proved.

A master who has employed skillful and competent general agents or superintendents is liable for injuries received by inferior servants through the negligence of those employed by such general agents or superintendents without due care or inquiry, or retained by them after knowledge of their incompetence.

While the servant assumes the ordinary risks, and, as a general rule, such extraordinary risks of his employment as he knowingly and voluntarily encounters, he is not required to exercise the same degree of care as the master in investigating the risks to which he may be exposed; he has the right to assume that the appliances and machinery furnished him by the master are safe and suitable for the employment in which he is engaged; and to assume, when engaged in an occupation attended with danger and requiring engrossing duties, that the master will not, without proper warning, subject him to other dangers unknown to him, and from which his occupation necessarily distracts his attention; and he has the right to rely upon the taking by the master of all usual and proper precautions against accident, and his faithful fulfillment of all the duties devolving upon him.

If an employee is ordered by his master into a situation of danger and obeys, he does not assume the risk unless the danger was so obvious that no prudent man would have obeyed the order; and the master will be liable for any injury resulting to him by reason of such dangerous employment. If, however, he leaves his own place of work for one more dangerous, in violation of the master's direction, he can not recover for an injury sustained after such change.

If the servant, upon being ordered to perform duties more dangerous than those embraced in his original employment, undertakes the same with knowledge of their dangerous character, unwillingly and from fear of losing his employment, he can not, if injured, recover damages from the master; nor can he recover such damages where the injury

results from an unexpected cause during the course of his employment; nor where the injury is sustained in the performance of a service not within the scope of his duty, if his opportunity for observing the danger is equal to that of his employer; and where an employee voluntarily assumes a risk he thereby waives the provisions of a statute made for his protection.

BUREAUS OF STATISTICS OF LABOR.

In Belgium the *Office du Travail* (*Ministère de l'Industrie et du Travail*) was established in 1895 at Brussels, the official head of the office being entitled *Chef*. A superior council of labor (*conseil supérieur du travail*), which made investigations and reports on matters relating to labor, has been in existence since April 7, 1892. November 12, 1894, a separate labor bureau, similar to the American and French type, was created under the Department of Agriculture, Industry, and Public Works. But in 1895 this department was separated into two departments, known as Department of Agriculture and Public Works, and Department of Industry and Labor, and the newly created labor bureau was made a division under this latter department.

In France the *Office du Travail* (*Ministère du Commerce, de l'Industrie, des postes et des Télégraphes*) was established July 21, 1891, at Paris, the official head of the office being entitled *Directeur*. The publications of the bureau consist of special reports on particular subjects, of which a number are issued each year, and since January 1, 1894, a monthly bulletin, *Bulletin de l'Office du Travail*.

In Germany the *Kommission für Arbeiterstatistik* was established June 1, 1891, at Berlin. This is a permanent commission which issues special reports from time to time on particular questions and reports of the minutes of its meetings. The material collected by it is compiled by the Imperial Statistical Bureau.

In Great Britain the Labor Department of the Board of Trade was established in 1893 at London, the official head of the office being entitled Commissioner. A service for the collection and publication of statistics of labor has been in existence under the Board of Trade since March 2, 1886. In 1893 this service was greatly enlarged and given its present name. Its reports, therefore, date from 1886-87, and consist of annual reports of operations and statistical abstracts, annual reports on strikes and lockouts, annual reports on trades unions, annual reports on wages (contemplated), special reports, and, since May, 1893, a monthly Labor Gazette.

In Switzerland the *Secrétariat Ouvrier Suisse* was constituted December 20, 1886, at Berne. The *Secrétariat* is an officer of the federation of labor organizations, but is subsidized by the government, which directs him to make certain reports. His publications consist of annual and special reports.

In Ontario, Canada, a Bureau of Industries was organized under the Commissioner of Agriculture, March 10, 1882, the official head of the Bureau being styled Secretary. Annual and occasional special reports are issued.

In New Zealand a Bureau of Industries was created in 1892. In the following year the designation of the bureau was changed to that of Department of Labor. Its publications consist of annual reports and a monthly journal commenced in March, 1893, under the title Journal of Commerce and Labor, which after the issue of a few numbers was changed to that of Journal of the Department of Labor.

We have been informed unofficially that an office for the collection of labor statistics has recently been established in Spain.

The above statement is believed to include information concerning all bureaus of foreign governments specially created for the collection and publication of statistics relating to labor. It is not a statement, however, of the extent to which foreign governments publish labor statistics, as a great deal of valuable information on this subject is contained in the publications of the central statistical bureaus or other offices of foreign governments.

BUREAUS OF LABOR STATISTICS IN THE UNITED STATES.

[In some instances there have been changes in the official titles of officers. They are given as they exist at present.]

State.	Official name of the office.
Massachusetts.....	Bureau of Statistics of Labor.....
Pennsylvania.....	Bureau of Industrial Statistics.....
Connecticut.....	Bureau of Labor Statistics.....
Ohio.....	Bureau of Statistics of Labor.....
New Jersey.....	Bureau of Statistics of Labor and Industries.....
Indiana.....	Bureau of Statistics.....
Missouri.....	Bureau of Labor Statistics and Inspection.....
Illinois.....	Bureau of Labor Statistics.....
California.....	Bureau of Labor Statistics.....
Wisconsin.....	Bureau of Labor and Industrial Statistics.....
New York.....	Bureau of Labor Statistics.....
Michigan.....	Bureau of Labor and Industrial Statistics.....
Maryland.....	Bureau of Industrial Statistics and Information.....
Iowa.....	Bureau of Labor Statistics.....
United States.....	Department of Labor.....
Kansas.....	Bureau of Labor and Industrial Statistics.....
North Carolina.....	Bureau of Labor Statistics.....
Maine.....	Bureau of Industrial and Labor Statistics.....
Minnesota.....	Bureau of Labor Statistics.....
Colorado.....	Bureau of Labor Statistics.....
Rhode Island.....	Bureau of Industrial Statistics.....
Nebraska.....	Bureau of Labor and Industrial Statistics.....
West Virginia.....	Bureau of Labor.....
North Dakota.....	Department of Labor and Statistics.....
Utah.....	Bureau of Statistics.....
Tennessee.....	Bureau of Labor Statistics and Mines.....
Montana.....	Bureau of Agriculture, Labor, and Industry.....
New Hampshire.....	Bureau of Labor.....
Washington.....	Bureau of Statistics, Labor, Agriculture, and Immigration.....

a From organization to May 11, 1874, commissioner.

b Reestablished. A like bureau had been established July 12, 1873, which, after making one report, was abolished July 23, 1875.

c Reorganized. See preceding note.

d To March 9, 1889, annual.

e This act created a bureau of labor statistics, and was repealed by an act approved March 23, 1883, which created a Bureau of Labor Statistics and Inspection.

BUREAUS OF LABOR STATISTICS IN THE UNITED STATES.

[In some instances there have been changes in the official titles of officers. They are given as they exist at present.]

Date of act of es- tablishment.	Year of organ- ization.	Locality of the office (post-office).	Title of head of office.	Issue of reports.
June 23, 1869.....	1869	Boston	Chief	Annual.
April 12, 1872	1872	Harrisburg	Chief (a).....	Annual.
April 23, 1885 (b) ..	c 1885	Hartford.....	Commissioner	Annual.
May 5, 1877.....	1877	Columbus	Commissioner	Annual.
March 27, 1878	1878	Trenton	Chief	Annual.
March 29, 1879	1879	Indianapolis....	Chief	Biennial. (d)
May 19, 1879 (e) ...	1879	Jefferson City ..	Commissioner	Annual.
May 29, 1879	1879	Springfield	Secretary	Biennial.
March 3, 1883	1883	San Francisco....	Commissioner	Biennial.
April 3, 1883.....	1883	Madison	Commissioner	Biennial.
May 4, 1883.....	1883	Albany	Commissioner	Annual.
June 6, 1883.....	1883	Lansing	Commissioner	Annual.
March 27, 1884	1884	Baltimore.....	Chief	Biennial.
April 3, 1884	1884	Des Moines.....	Commissioner	Biennial.
June 27, 1884 (f) ...	f 1885	Washington....	Commissioner	Annual and special. (g)
March 5, 1885	1885	Topeka	Commissioner	Annual.
February 28, 1887..	1887	Raleigh.....	Commissioner	Annual.
March 7, 1887	1887	Augusta.....	Commissioner	Annual.
March 8, 1887	1887	Saint Paul.....	Commissioner	Biennial. (h)
March 24, 1887.....	1887	Denver	Deputy Commissioner (i)	Biennial.
March 29, 1887.....	1887	Providence	Commissioner.....	Annual.
March 31, 1887.....	1887	Lincoln.....	Deputy Commissioner (j)	Biennial.
February 22, 1889..	(k)	Charleston.....	Commissioner.....	Annual.
October 1, 1889	1889	Bismarck.....	Commissioner.....	Biennial.
March 13, 1890.....	(l)	Salt Lake City ..	Territorial Statistician..	Annual.
March 23, 1891.....	1891	Nashville.....	Commissioners.....	Annual.
February 17, 1893..	1893	Helena.....	Commissioner.....	Annual.
March 30, 1893.....	1893	Concord	Commissioner.....	Annual.
March 19, 1895.....	(l)	Olympia	(i)	(l)

f This office was created June 27, 1884, under the title of Bureau of Labor and the Commissioner appointed January 31, 1885. By an act passed June 13, 1888, the office was established as the Department of Labor.

g Also, bimonthly bulletins are to be published beginning with November, 1895.

h To April 24, 1889, annual.

i The secretary of state is ex officio commissioner.

j The governor is ex officio commissioner.

k First report issued December 1, 1894.

l No report yet issued.



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OF THE

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No. 2—JANUARY, 1896.

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EDITED BY

CARROLL D. WRIGHT,
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CONTENTS.

	Page.
The poor colonies of Holland, by J. Howard Gore, Ph. D., Columbian University	113-126
The industrial revolution in Japan, by William Eleroy Curtis.....	127-146
Digest of recent reports of State bureaus of labor statistics:	
Colorado.....	147
Illinois	147-155
Maine	155-157
Maryland	157, 158
New Hampshire.....	158-161
Ohio.....	161-165
Trade unions in Great Britain and Ireland.....	166-169
Wages and hours of labor in Great Britain and Ireland.....	170-176
Strikes in Switzerland in recent years.....	177-180
Notes concerning the money of the United States and other countries, by William C. Hunt, of the Department of Labor.....	181-196
The wealth and receipts and expenses of the United States, by William M. Steuart, of the Department of Labor.....	197-200
Decisions of courts affecting labor.....	201-218
Extract relating to labor from the new constitution of Utah.....	219
Note regarding bureaus of statistics of labor.....	220

BULLETIN
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DEPARTMENT OF LABOR.

No. 2. WASHINGTON. JANUARY, 1896.

THE POOR COLONIES OF HOLLAND.

BY J. HOWARD GORE, PH. D., COLUMBIAN UNIVERSITY. (*a*)

The poor colonies here described are not a creation; they are a development. They have not been elaborated out of speculation as to what they ought to be, but forged into their present organic form under the fire of criticism and the shocks of adversity.

General van den Bosch, very soon after the devastating war which was terminated by the battle of Waterloo, saw in Holland thousands of families reduced to helplessness and poverty. He realized that workhouses as well as poorhouses very often feed pauperism; that they systematize it, place their stamp of recognition, if not approval, upon it, and by so doing increase it. Moreover, these provincial or municipal agencies were usually located in large cities into whose overcrowded streets the released or acquitted paupers were cast adrift to again become amenable to the poor law.

The problem, therefore, that presented itself to General van den Bosch was how to help the poor in their life struggle, not merely how to help them to tide over the demands of a single week or month. The first point that received decision was, that in whatever shape his hopes might be ultimately realized the location at least should be in the country. If the land is improved by man, he reasoned, then man can be improved by the land.

Through his influence, and chiefly through his instrumentality, there was organized in 1818 the Society of Beneficence (*Maatschappij van Veldadigheid*). Very soon thereafter the society purchased a large tract of

a Dr. Gore was the United States Commissioner-General to the International Exposition at Amsterdam in 1895. The information embodied in this article was collected by him during a visit to the poor colonies in July of that year.

barren uncultivated heath, which, with additions subsequently made, now contains 5,100 acres. It is situated near the center of the kingdom, northeast of the Zuyder Zee, about 5 miles from the town of Steenwyk, and at the junction of the three provinces, Drenthe, Friesland, and Overijssel.

With the alluring motto, "Help the people and improve the land," considerable enthusiasm was aroused, and in a short time there was enrolled a membership paying annually into the treasury of the society \$22,000. The organization was in such a prosperous condition, and it was able to do so much for its beneficiaries, that it attracted the attention of the State. The proposition was soon made that the society take charge of the wards of the Government, that is, the beggars, foundlings, and orphans. The conditions offered were so favorable that the society accepted them.

It was at once realized that it would be unwise to put those declared by judicial acts to be incapable of self-support by the side of others who were being encouraged to believe in their ability to become sooner or later not only independent but contributing members of society. Consequently the organization, in order to keep these two classes apart, secured land and established two beggar colonies—one in Overijssel, named Ommerschans, and the other in Drenthe, named Veenhuizen.

At the two latter the society continued the generous policy which it had already inaugurated. Thus the beggar colonies became popular, and a man released at the expiration of his sentence did not rest until he succeeded in securing a second conviction. It therefore became necessary to add to each sentence such a term of imprisonment at hard labor as would efficaciously rob the stay at the colonies of the greater part of its charm.

Besides acting as an encouragement to begging and profligacy, the generous policy of the society toward the beggar colonists had a worse effect. There was so much said in police and court circles about the beggar colonies that people failed to discriminate between them and the free colony. They thought the Government was meeting all expenses, and soon lost interest in the institution which relied for its maintenance upon their contributions, and so it became a sort of State asylum. The free colonists felt that they were being placed on the same footing with a convict class, at least in the minds of many, consequently the institution which was originally intended to act preventively against pauperism by helping sinking families up to a livelihood—earning condition—now acted repressively against this very class.

In this condition of disrepute into which the free colony fell, colonists were so slow to take up the lands of the society that it was compelled to farm them itself, using the weak, unwilling members of the other colonies. This resulted in great loss to the society. It was not possible to break the contract with the Government, and an organization was needed to administer the conditions growing out of this contract.

In 1843 a reorganization was effected. Prince Frederick of the Netherlands accepted the presidency and secured such special favors from the Crown, such as the contract for making all coffee bags used by the chartered Dutch India Company, that the financial condition of the colonies rapidly improved. This, however, not only awakened hostility on the part of the factories throughout the kingdom, but it also transformed the agricultural colony into a manufactory and made mechanics instead of farmers. The usual result of a combination of such diverse purposes soon came and the society found itself in 1856 in debt to the amount of \$3,000,000.

The State realized that it had been greatly benefited during this period, and also gave the society \$1,500,000 with which to pay private creditors 65 per cent of their claims.

A complete reorganization followed. Ommerschans and Veenhuizen became government property and a complete disunion of the beggar and the free colonies took place. Naturally this experiment was looked upon as proving that agricultural colonies can not succeed. This prejudiced opinion should be kept in view in order that one may fully realize how handicapped the present organization is in its struggle to do good.

Still, the experiment had attracted the attention of philanthropists and even of other governments. During this time the colonies had been visited by official commissions from France, Austria, and Scotland.

The organization as at present constituted dates from September 15, 1859.

The underlying principle in the revised scheme seems plainly to be to assist the destitute in meeting his wants, and the wants of all who depend upon him, without suggesting a feeling of dependence and without disturbing the family relations.

It is likely that the affections as well as the exigencies of life, which have so effectually kept the Dutch families intact, have been potent in forming the conditions under which they began to dispense their benefactions; nor is it at all improbable that the large Jewish population, among whom the family ties are extremely strong, has been instrumental in giving directions to the elaboration of the systems now in vogue.

The entire conduct of the affairs of the society rests with a commission of five persons, one of whom is designated as chairman and another as secretary. This commission meets at regular intervals, either in Amsterdam or at the colony. It fixes the salaries of all employees, but selects only one, the director, who, being responsible for the faithful discharge of all duties by his subordinates, has the right to choose them.

All contracts are made by the commission, and, in short, it has all the rights and privileges of an ordinary corporation. It realizes that it is administering the affairs of a company to which a large number of persons make annual contributions, consequently it considers with

great care all propositions which look toward a change of policy or the venture of money.

In order to keep the contributing members of the society in close relations with the work which is being done, there is a general meeting held annually in Amsterdam, to which each branch society sends a delegate. This delegate has one vote for every twenty members in his local society.

These branch societies are the outgrowth of a club system. It was ascertained that a house and land enough for the support of one family had originally cost the society about \$680, hence it decreed that whenever any person or party of persons paid into the treasury this sum of money he or they could have the privilege of sending to the colony one family, which should be retained there without further cost to the sender. Since it was not easy to find persons ready to contribute so much at once, a clubbing system was proposed and annual fees paid—in amount equivalent to the interest on \$680 at 3 per cent. Thus it happens that for each multiple of twenty represented in the membership of a branch society or department it has a ward at the colony, and hence the supporters of this ward as well as the branch society should have a vote in the general meetings of the organization.

For every \$20.40 annually contributed a department has the right to send one family to the colony, and this family remains there as long as this sum is paid. In return for this contribution the department receives reports periodically from the director regarding all of its families, with a statement showing the financial status of each. If attention is called to a needy family in a neighborhood in which there is an organized department with a sufficient sum to its credit with the society, the head of the family is sent to the colony on a tour of inspection. A railroad ticket is furnished him and all incidental expenses paid. If he returns favorably impressed, the entire family is given transportation thither. This time the trip is made by water, since this is cheaper, and time is not an important element, and one can go from almost any point in Holland to any other by water. This entire expense is met by the department which sends the family.

Upon arrival a house is provided and the immediate wants of the household attended to—not in the shape of gifts but advances, which must be paid for in installments according to conditions previously made known to the newcomer. He is also supplied with a sheep (ewe), which can be pastured on the society's farm for a small sum. On this he makes weekly payments. The purchaser is advised to insure this animal in the general funds of the society, so that in case of death it can be replaced without loss to the owner. At the very beginning a man is invested with the feeling of ownership, and a way is provided by which, with due economy, he may meet his obligations.

In passing it might be said that the ewe in Holland takes the place of the goat. The milk is quite as good and, in addition to the increase, the sheep yields wool enough to assist in clothing the family.

All the wage-earning members of this newly arrived family are at once put to work on one of the society's farms or in some of the shops or factories operated by it. Idleness is not tolerated. The children must either be learning a trade or be at school. Although the free-school system originated in Holland, the spirit of individual liberty is so current that no successful attempt has been made to institute compulsory education. But within the colony the people are subject to the regulations of the colony. Even if a boy's parents intend that he shall become a farmer, he must learn some simple trade, such as basket making, because there is so much time during the long winters when the farmer can not be at work in the ground. It is therefore well when he can occupy himself at this time with some profitable indoor occupation.

Wages, such as are current in the vicinity of the colony, are paid weekly, after having deducted: The installment on the debt incurred upon arrival; house rent, not exceeding 20 cents; 1 cent infirmity fee for each person; 4 cents for the clothing fund; and a reserve for the family emergency fund, equivalent to 10 per cent of the gross earnings. That all transactions may be thoroughly understood each debit and credit is entered in a pass book.

In this connection it is interesting to note that the boys and girls, even while serving as apprentices, are paid for each merchantable article they make. If a boy makes a good basket he knows exactly how much he will receive for it; but should the work be defective, his compensation will be less. This of course furnishes an important stimulus to put forth best endeavors and also tends to hasten the coming of the time when faultless jobs can be turned out.

After two years of probation, if the head of the family has given evidence of industrious habits and a commendable desire to pay his debts, he is promoted to citizenship, and is called a "vrijboer," or "free farmer." If there is a place available he is put on it—a farm of 7.7 acres—apparently a small one, but it is so fertile that it will readily support an ordinary family. This plot of land is either one just vacated for some reason, or else it has been in the hands of the society; therefore it is not barren, but is provided with such planted crops as would have been in place in case the tenancy had begun months before. If the occupancy should begin in midwinter, the farmer is furnished with fodder for five months, enough rye to sow 2.4 acres, and 33 bushels of potatoes. Again, these are not gifts; he becomes responsible for their cost as well as for the cow which was provided him. His wants are not magnified by the feeling that all he receives are gifts. He has just passed through the ordeal of paying debts on the installment plan, and fully realizes the pressure of debt and the slow and tedious process of removing it.

In return for the improvement made during the probationary period the farmer is admitted into new privileges. He has the full enjoyment of his farm, cultivates it as he deems best, can work for others when he

can spare the time, even going outside of the colony with the consent of the director, and has a vote in electing a delegate to the colonial council, while the only added burden is the rent for the land and a somewhat larger payment on his debts. The rent of course varies somewhat with the condition of the house and the fertility of the land, but the average annual rent is \$20. The payment on his indebtedness is only \$4 a year. In addition to this, he must each year put on the land \$14 worth of manure, but this item is remitted in case he owns a cow and is duly saving of all manure.

It has been the purpose of the society to have all the houses alike and each plot of ground as desirable as any other. But this is impossible. Some of the houses are comparatively new, yet the older ones in many cases are more favorably located with respect to school and church. As is usual in Holland, the stable, barn, and house of the small farmer are all under one roof. One can step directly from the barn into the house, but the former is kept so clean that one would hardly notice that the rooms were put to different uses were it not for the surrounding furniture and utensils. The barn is large enough to house the entire products of the farm, the cow naturally not requiring much space. The house itself has two rooms and an attic—one used for a kitchen and dining room and the other for a sitting room and bedroom. The bedroom feature is not apparent, for, as is usual in this section, the beds are shelves in a closet, so that during the day when the closet doors are closed no suggestion of a bed can be seen.

The local department has the right to designate who shall be sent to the colony from its district, and the colony must accept the family sent. But the board of commissioners can, whenever it deems it best, dismiss or eject a tenant, whether he be laborer or farmer.

The department is responsible for the debts of those persons whom it placed in the colony, but it must receive from the society's officers quarterly reports of all its wards. These reports must indicate whether or not the conduct of each family concerned was satisfactory, how much it owed the society, and what change took place in the account during the preceding three months. If in any case the indebtedness should persistently increase, the department can announce its intention to withdraw all further assistance, but this does not exempt it from the payment of all accrued debts.

A man ordinarily can not remain in the colony as a laborer more than two years. If he fails in this time to give evidence of the possession of those qualities demanded of a farmer he must leave. But once admitted to the farmer class he may remain so during good behavior. There are several cases in which, after the death of the head of the family, the widow continued as tenant; and in one instance at least a son, after having attained majority, married and retained the farm.

That the conditions are regarded as favorable may be seen from the fact that of the 284 families residing in the colony in 1894 three classed

as laborers failed to qualify as farmers and hence were dismissed, while not a single farmer moved away.

While the lands of the society have been spoken of as the colony, there are in reality four subdivisions so important that each has its separate name; they are Frederiksoord, Wilhelminasoord, Willemsoord, and Colony Number Seven. The principal offices are at the first named, which is also the one nearest the town of Steenwyk.

The person immediately in charge of the colony, and who is responsible for the conduct of its affairs, is the director—at present Mr. Job van der Have. His duties are clearly defined in the regulations of the society under nineteen distinct heads, but they may be summarized as follows: He conducts the correspondence; executes the orders of the board of commissioners; looks after the receipts and expenditures; keeps a double-entry account with all the departments and employees; provides for the maintenance, liberty, and safety of the roads, bridges, waterways, farms, and open squares; protects the real and personal property of the society; controls the public health; inspects the schools; cares for the external interests of public worship; appoints or discharges all officers of the society denominated second class; makes up the budget for the coming year; formulates plans for the furtherance of the best interests of the colony; keeps a close watch over all the factories of the colony; in short, does everything that can possibly be done for the welfare and comfort of all concerned.

The director has such clerical help as is needed, including a bookkeeper, on whom falls the task of keeping several hundred rather complicated accounts. Then he has directly under him subdirectors, each of whom has immediate charge of one of the seven districts into which the colony is divided. The subdirector gives to the bookkeeper a weekly statement showing the amount of services rendered during that week and by whom. From these statements the bookkeeper makes up the credit sides of his accounts.

These officers have a still more important function. They, from frequent inspections, determine whether each farmer is getting the best possible yield from his land. If not, they give such advice as will enable him to farm more successfully. The undivided tracts, or large farms, are directly under these subdirectors, and, since the laborers are employed on these farms, it is they who are in the position to make the recommendation which, at the end of the two years already mentioned, either promotes the laborer to citizenship or dismisses him from the colony.

The counsel of the directors in agricultural matters is more than mere haphazard guessing. One of the Government agricultural experiment stations is located in the colony. Here experiments are conducted to determine specifically the best treatment of the soil in that immediate neighborhood and the kind of seed best suited to the land and the climatic conditions which there exist.

In addition to this schools of agriculture, of horticulture, and of forestry have been erected in the colony through the beneficence of General van Swieten. Here excellent instruction is given in the subjects usually included in the schools named. To boys from the colony tuition is free. The colony is benefited not only by the amount of information directly imparted to the pupils, but by the example continually before the eyes of all the colonists, especially in the improved methods of vegetable culture. The value and importance of a garden to the household is emphasized by example as well as by precept. Holland has been compared to a vast garden, but in its vastness the vegetables that thrive in one part may be failures in others, and so the colonists coming from other parts of the kingdom are saved the costly lessons of experience by having before them the fruits of careful experimentation.

The gardens of the School of Horticulture have, in addition to useful vegetables, ornamental flowers, and the daily or frequent sight of the gay flower beds has awakened in many a responsive love for the beautiful, until now a large proportion of the houses have either a bed of flowers in the front yard or else potted plants in the windows. The officers of the society appreciate the elevating influence of beautiful surroundings, even if limited to a few bright flowers, and so to encourage the care and cultivation of them they give each summer several prizes for floral displays.

The statement should not be omitted that prizes are also awarded to farmers for the general appearance of the farm, condition of live stock, and yield of grain per acre.

Pupils of the School of Forestry have an excellent opportunity for becoming acquainted with the practical side of their chosen profession in caring for the 943 acres of forest in the colony; and in obtaining the manual skill demanded they also have a chance to earn some money, for since the forest needs this care all time given to it, over and above what is required as a part of the course of study, is paid for. In Europe the subject of forestry receives considerable attention so that the graduates of a good school readily secure situations.

In the colony there are also such public schools as the state usually provides for communities of this size, and all children must attend school, at least until they can read and write.

From these last remarks it will readily be seen that the policy of the society is to place the coming generation in a self-supporting condition. It is realized that the class of men who come to the colony as well as the age at which they come is such that their existence in the world must be at a cost to some one. But the society endeavors to reduce this cost to a minimum, and better than that—to so educate their children that they may never be a burden to the community. If this principle could be completely put into practice, pauperism would have the life of only one generation.

The society is absolutely free from religious bias. It has within the colony a Protestant and a Catholic church, and provides for the maintenance of both. But while the colonists are permitted to elect their church, they are required to see that their children are more than mere attendants upon service, for one of the rules provides that all children must know the catechism of their particular faith before the age of 14 is reached.

Since the majority of men who are sent to the colony are those who have passed through a life struggle of greater or less duration, they are of middle age or older. They are also people who have been obliged to undergo hardships, and for most of the time with insufficient nourishment, consequently they soon reach a helpless old age. It has been impossible in a short period of residence in the colony, even under the excellent system there in vogue, to lay by anything for these years of enforced idleness. The society has therefore erected an "Old Folks' Rest," and agrees to pay so much weekly toward the support of those unable to work. The colonists are urged to aid in the maintenance of this home, and they cheerfully meet the appeal to the extent of their ability. They know from recent experience the value of aid and the sweetness of charity.

At the time of my visit in July, 1895, there were 1,826 people in the colony. They were grouped as follows: Farmers, 199 families; laborers on probation, 85 families; individual laborers, not belonging to the foregoing, 165 persons.

During the preceding year there had been 35 births and 24 deaths in the colony, and 46 young men withdrew to accept positions or regular work outside.

To govern this large body of men, coming from all parts of the kingdom and bringing with them the traditions and habits of their native villages, is no simple matter nor can it be an easy task. It has been simplified somewhat by the society and made easier by calling on the colonists themselves to see to it that the rules were observed. In these regulations it will be noticed that there is a strong infusion of the golden rule, and the purpose is manifest to throw around the rising generation those influences which will lift it out of the helpless state. The rules forbid—

1. Disobedience, insubordination, or insult offered any officer of the society or any of its employees.
2. Fighting or disturbing the peace in any manner.
3. Drunkenness.

The fine inflicted for a violation of either of the above is from 10 cents to \$1.20, or imprisonment for a period of from one day to three days, for the first offense and ejection from the colony for a repetition.

4. Absence from the colony in excess of the permissible twenty-four hours, or of the leave granted by the director.

A fine of from 4 to 20 cents for each twenty-four hours of absence over and beyond the leave is imposed, or an imprisonment as above. In this connection it should be said that this, as well as all other rules, applies to the resident officers of the society. The director can not absent himself for more than one day without the written consent of the president of the board, and the under directors, clerks, and all employees must obtain permission for similar absences from the director.

5. The occupation of quarters or buildings without the consent of the director.

The chief purpose of this rule is to compel the grown members of the families to live with their parents and not where fancy might lead them. Then, too, single men are occasionally admitted to the colony and it is necessary that the director should always know where they are located, and this would be impossible in the absence of such a regulation as the one just given. This is deemed of such vital importance that its violation is followed by immediate dismissal.

6. Loss, destruction, theft, or pawning of the property of another, calls for the restoration of the property or its value, and a fine varying from 20 cents to \$1.20.

A second offense brings about either imprisonment or ejection.

7. Injury to the morals of another condemns the offender to prompt dismissal.

The infraction of this rule is the one most dreaded. As can be inferred the majority of the colonists belong to a lower class, and their conceptions of morality and virtue are not so clear in their minds as to inspire proper conduct in the absence of such a regulation.

8. Wanton wastefulness, carelessness, and laziness are punished by imprisonment with a notification to that effect to the department which sent the offender.

No fine is imposed in this instance for the good reason that a person so worthless as to fall under the condemnation of this rule would not be in a position to pay a fine.

9. Refusal to pay his debts to the society demands a confiscation of the debtor's property and its sale.

But the society is extremely indulgent. It makes due and charitably due allowance for crop failures, sickness, or unexpected losses of any kind. At no time does it lose sight of the fact that its purpose is to help, and in all of its safeguards and efforts to protect itself there is evident an incentive directed toward the borrower to pay his debts. For a cash payment, made before it is due, of \$8 he is given credit for an additional 80 cents, and the inability to meet his obligations brings to the farmer such special advice and encouragement from the authorities as will insure better returns from his farm in the future. This aid I know is efficient, for in looking over the accounts of a large number of the farmers I noticed only one who owed as much as \$200, while I am sure that the average indebtedness was not one-fourth of that amount.

Before getting too far from the subject it would be well to explain how the rules above given are enforced.

All questions pertaining to the welfare of the community, the trial of offenders, and matters of local interest are in the hands of a council consisting of the director, who is *ex officio* president; the bookkeeper, who is secretary; the treasurer of the society, and one delegate from each of the four subdivisions of the colony. These delegates belong to the farmer class and are elected annually, the laborers not having any vote in this election.

The laborer is not disfranchised in the election of state or local officers; this matter is beyond the jurisdiction of the society, nor is one released from his obligations to the State or province by being a member of the colony. However, the code of the colony is so satisfactory that all infractions of law and order within its domain that can be punished by its provisions are left to it.

The practical question comes, What does all this cost?

The last balance sheet, that for 1893, shows that the estimated value of the property is \$533,274, and the indebtedness \$43,380.

At the time of the last reorganization the indebtedness was \$56,000, and to the war of the rebellion in the United States was attributed the responsibility for this debt. The contract which the society had for so many years following 1843 for making coffee bags had proved so profitable that the society, after its withdrawal from this contract, continued the manufacture of jute bags in competition with private firms. From 1861 to 1864 the coffee trade with the United States was demoralized, and all industries depending on this trade suffered loss.

The last balance sheet (1893) shows that the receipts and expenses were as follows:

RECEIPTS.

From members.....	\$5, 418. 40
From special gifts.....	3, 931. 20
From rent of land and farm products.....	3, 128. 52
From forest.....	615. 02
Profit on laborers' and apprentices' work.....	733. 44
Total.....	<u>13, 826. 58</u>

EXPENSES.

Deficit for the preceding year.....	\$745. 94
Interest on debt.....	1, 381. 91
General expenses of administration.....	4, 790. 32
Religious services and special instruction.....	1, 097. 32
Ditching, road making, unproductive work, and losses in the various fac- tories.....	8, 092. 00
Advances to colonists over and above returns.....	538. 29
Total.....	<u>16, 645. 78</u>

That is a deficit for the year of \$2,819.20, or \$1.54 for each inhabitant.

To see how the inhabitant is taken care of, and to what extent, the accounts for one week of two extreme cases are presented:

A family of seven persons, in which there were four above 15 years, two above 10, and one under 5, earned in one week during the winter season \$4.36. From this amount the following showing was made:

Installment and house rent.....	\$0.56
Infirmity fee .....	.07
Clothing.....	.28
Ten per cent for reserve fund.....	.44
Potatoes.....	.64
Cash	2.37
Total	4.36

If 80 cents a week were allowed for bread, they would have a surplus of \$1.57 for sundry clothing and incidentals.

In the other family there were also seven persons—three above 15, one above 10, two above 5, and one under 5. During the same week they earned \$2.36, and spent as follows:

Installment and house rent.....	\$0.56
Infirmity fee .....	.07
Clothing.....	.28
Ten per cent for reserve fund.....	.24
Potatoes.....	.77
Bread, from the colony bakery.....	.87
Total	2.79

That is 43 cents more than they earned. Because of the number of nonearning members of this family it was allowed \$1 a week, so that it had an actual balance in its favor of 57 cents.

As already said, these are perhaps extreme cases and represent two distinct types. In the first cited the man came to the colony when young, his children were born there, and all were accustomed to habits of industry and frugality. The rooms of their house were cosily furnished, a large mahogany chest of drawers represented the savings of many weeks, the omnipresent clock was ticking against the wall, and a rug covered a part of the floor.

The head of the other family had been a mechanic, grew up in a city, and, having failed in his efforts to support his family by his trade, came to the colony later in life. He was, therefore, not used to farm work, and, besides, was disheartened by the recollection of having once failed. But notwithstanding these disadvantages this entire family was provided for, educated, and trained for usefulness at a total annual cost of \$52, or less than \$8 for each member. An examination of the entire yearly expenses of the colony will show that the average expense for each person there is only \$9 a year. This average of \$9 does more than feed, clothe, and shelter these needy persons; as has been repeatedly said, it educates the young, gives them religious instruction, and provides them with a bread-winning trade.

It might well be asked, What more is desired? And in fact this question came to mind innumerable times—first while reading the con-

stitution of the society and its annual reports, and then again during my sojourn in the colony in visiting the homes of the laborers; in walking over the farms of the citizens; in watching the happy children at play or their older brothers and sisters working in the basket factory, weaving jute, or drying fruits and vegetables; in looking through the home for the aged, the churches, the professional schools, and the public library. What more is desired? The society would answer, "More money." For, although they have reduced their bonded indebtedness to \$37,200, the interest on this sum was last year one-third of the entire deficit.

This shortage is not through any bad management at the colony nor by the society. The departments did not pay their stipulated quota for each family that they had at the colony. Their payments fell short by almost identically the amount of the deficit. The society naturally expected the entire amount, they made their plans and promises accordingly, and their disappointment was shown in the untoward balance.

To say how many persons have been aided would be a mere recital of statistics; to attempt to estimate the amount of good accomplished would be impossible. As may be seen, the assistance is of the best possible character; people are helped to help themselves, they are taught self-reliance; faith in mankind is engendered by the faith that is placed in the individual. The class of persons benefited are in general those who lack opportunity, people unable from some fault or misfortune to make a start. The society practically says: "We will put you in a position to prove your worth, then if found worthy you shall have a start." The man thus addressed works with confidence that the promise will be kept, and knows that starvation will be kept from his family during this period of probation.

Experience has shown that the best results are obtained with people from small towns or from the country, while those who have lived in a large city, for a longer or a shorter period, chafe under the restrictions of the colony and show a reluctance to exchange the freedom of a city for its restraints. This experience also reflects itself in the donations as well as the interest, they being, per inhabitant, the minimum in Amsterdam and Rotterdam and the maximum in Utrecht and the smaller cities.

It must not be imagined that the colony is in any sense an agricultural normal school, that good farmers are here taught skill, wisdom, and experience, and sent throughout the kingdom to teach others by precept and example how to farm. As already intimated, but few, very few, families willingly leave the colony. And why should they? They would necessarily be renters wherever they should go, and in the colony there is land enough for generations to come. Here they are not subjected to exorbitant rents, their tenancy is secure, the manifested will is accepted as an important step in the doing, and their landlord is their best friend.

Then, again, it is best that such persons should remain near the hands that are ready to catch them should they stumble, close under the arm that is willing to shield them should adversity come. They are men who were helped to their feet, steadied during their early attempts to walk alone along the highway of independence, and strengthened for life's conflict with moral and financial support. They are not men strong in every respect, or they would not be in the colony; they are the men, within the boundaries of "brave little Holland," deficient in moral courage and unfortunate through accident or vice, or there would be no "Maatschappy van Veldadigheid." So when this society elevates a man into its citizenship it makes him in a truer sense a citizen of Holland. The Government appreciates this fact, and gives the colony an agricultural experiment station. General van Swieten saw its power for good, so, when he wished to perpetuate the memory of a beloved son, he endowed its professional schools. The corps of faithful ministers and teachers realize the importance of the work committed to them and labor with zeal and devotion. Her Majesty the Queen is the society's patron and annual benefactor.

Again I must call attention to the important fact that the beneficiaries are not abased by their benefits; they are not caused to feel that they are paupers; their independence is not expelled by the acceptance of gratuities. They experience the great joy of having found a friend who will loan them money, give them advice free from selfish motives, and afford them the opportunity to become men.

For opportunities to become so well acquainted with the society and its work in the colony, I am indebted to Mr. van Eeghen, secretary of the Amsterdam department, and Mr. Bleeker, member of the faculty of the School of Horticulture, who gave me freely of his time at Frederiksoord.

THE INDUSTRIAL REVOLUTION IN JAPAN. (a)

BY WILLIAM ELEROY CURTIS.

Japan is becoming less and less dependent upon foreign nations for the necessities and comforts of life, and is making her own goods with the greatest skill and ingenuity. Since their release from the exclusive policy of the feudal lords, the people have studied the methods of all civilized nations, and have adopted those of each which seem to them the most suitable for their own purposes and convenience. They have found one thing in Switzerland, another in Sweden, another in England, others in Germany, France, and the United States, and have rejected what is of no value to them as readily as they have adopted those things which are to their advantage. It is often said that the Japanese are not an original people; that they are only imitators; that they got their art from Korea, their industries from China, and that their civilization is simply a veneer acquired by imitating the methods of other countries. All of this is true in a measure, but it is not discreditable. Under the circumstances that attend the development of modern ideas in Japan, originality is not wanted, but a power of adaptability and imitation has been immensely more useful. The Japanese workman can make anything he has ever seen. His ingenuity is astonishing. Give him a piece of complicated mechanism—a watch or an electrical apparatus—and he will reproduce it exactly and set it running without instructions. He can imitate any process and copy any pattern or design more accurately and skillfully than any other race in the world. It is that faculty which has enabled Japan to make such rapid progress, and will place her soon among the great manufacturing nations of the world.

It was only forty years ago that the ports of Japan were forcibly opened to foreign commerce. It was only twenty-eight years ago that the first labor-saving machine was set up within the limits of that Empire. Now the exports and imports exceed \$115,000,000.

The following table shows the general character of the merchandise imported into Japan during the year 1894: (b)

Raw cotton.....	\$9, 551, 961
Machinery, etc.....	7, 974, 543
Sugar	6, 662, 261

a The facts on which this article is based were collected by Mr. Curtis, personally, while in Japan during the past year.

b Values stated in American gold on the basis of 2 silver yen to the dollar.

Breadstuffs, including rice.....	\$5, 877, 068
Iron and steel.....	4, 589, 384
Woolen goods.....	3, 991, 441
Cotton yarn.....	3, 988, 683
Cotton fabrics.....	3, 788, 267
Oil (mostly kerosene) and wax.....	2, 845, 997
Drugs and medicines.....	1, 798, 140
Dyes and paints.....	986, 641
Furs, hides, and leather.....	904, 034
Provisions.....	886, 602
Copper, brass, and lead.....	876, 973
Books and stationery.....	451, 783
Oil cakes.....	411, 098
Hemp and jute.....	403, 917
Other textiles.....	279, 358
Silk goods.....	261, 457
Wines and liquors.....	257, 671
Glassware.....	183, 884
Clothing.....	179, 807

The chief exports from Japan in 1894 were as follows:

Raw silk.....	\$21, 446, 376
Textile fabrics, mostly silk.....	8, 867, 744
Food products, mostly rice.....	5, 406, 599
Tea.....	3, 965, 143
Coal.....	3, 289, 229
Metals, mostly copper.....	3, 015, 186
Matches.....	1, 897, 817
Drugs and medicines.....	1, 230, 816
Floor matting.....	982, 747
Porcelain.....	742, 426
Fish, oil, and vegetable wax.....	639, 595
Lacquer ware.....	398, 770
Umbrellas.....	388, 032
Straw plaiting.....	371, 700
Bamboo and wooden ware.....	289, 498
Tobacco.....	174, 137
Fans.....	171, 533
Paper and stationery.....	169, 147

It is a curious fact that 10,273,401 fans, 2,348,810 umbrellas, 134,209 screens, 455,659 paper lanterns, and 13,843,022 gross of matches were shipped from Japan in 1894.

The following table shows the growth of the foreign trade of Japan during the last ten years: (a)

EXPORTS AND IMPORTS, 1885 TO 1894.

Year.	Exports.	Imports.
1885.....	\$18, 573, 346	\$14, 678, 484
1887.....	26, 203, 841	22, 152, 126
1890.....	28, 301, 753	40, 864, 290
1892.....	45, 551, 377	35, 663, 040
1894.....	56, 623, 043	58, 740, 978

a Values stated in American gold on the basis of 2 silver yen to the dollar.

The following table shows the distribution of the exports of Japan among the several nations, arranged according to the magnitude of the trade in the year 1894: (a)

EXPORTS BY COUNTRIES, 1890, 1892, AND 1894.

Country.	1890.	1892.	1894.
United States	\$9,910,719	\$19,337,486	\$21,661,779
France	4,177,197	9,046,847	9,749,388
Hongkong	4,683,203	6,644,270	8,099,740
China	2,613,748	3,179,430	4,406,994
Great Britain	2,819,490	1,960,876	2,975,099
British India	295,393	711,145	1,844,079
Germany	423,461	470,391	758,774

The remainder of the exports of Japan are sent in small amounts to nearly every nation in the world.

The following table shows the source from which the imports of Japan come, arranged according to the magnitude of the trade in 1894: (a)

IMPORTS BY COUNTRIES, 1890, 1892, AND 1894.

Country.	1890.	1892.	1894.
Great Britain	\$13,309,551	\$10,394,666	\$21,094,937
China	4,424,843	6,254,705	8,755,753
United States	3,437,266	2,994,027	5,491,279
British India	4,455,446	3,831,002	5,280,224
Hongkong	2,747,956	3,492,861	4,499,859
Germany	3,428,478	3,187,524	3,954,771
France	1,934,666	1,810,250	2,174,024

The Japanese coinage is based on the decimal system and corresponds with that of the United States. A rin was originally the same as a mill. Ten rin make 1 sen and 100 sen make 1 yen, which used to be as good as a gold American dollar, but is now worth about 51 cents. Therefore, a man who goes to Japan from the United States or Europe with money that is at par with gold finds his funds almost doubled immediately.

The industrial revolution that is now going on in Japan is quite as remarkable as the political revolution that occurred there thirty years ago, and equally important to the rest of the world. Until recently all the manufacturing done in Japan has been in the households, and 95 per cent of the skilled labor is still occupied in the homes of the people and in a measure independent of the conditions that govern wage workers in other lands. The weaver has his loom in his own house, and his wife, sons, and daughters take their turns at it during the day. It has always been the custom for children to follow the trade of their parents. The finest brocades, the choicest silks, the most artistic porcelain, cloisonné, and lacquer work are done under the roofs of humble cottages, and the compensation has heretofore been governed usually by the quality of the piece produced.

^a Values stated in American gold on the basis of 2 silver yen to the dollar.

In the olden times the feudal lord, or daimio, who ruled a particular province, was always expected to purchase the highest grades of industrial art that were produced in his jurisdiction, and if he did not wish them they were sold to some of his subordinates who had money to invest in such luxuries, but now there are middlemen who stand between the artisans and the public markets and buy for both the local and the export trades, taking all sorts of goods and disposing of them wherever they can do so to the best advantage. These middlemen are the same who used to handle similar wares during the days of the daimios, and their fathers followed the same business before them. The relations between the producer and his agent have gone on for centuries in the same family. Asana, the weaver, sells his brocades to the great-grandson of the merchant who bought his great-grandfather's product. When a large order is to be placed, say, for 1,000 lacquer trays or 10,000 embroidered shawls, the middleman distributes it among the families of his acquaintance who are in the habit of doing such work. If they are poor he advances them money and furnishes them materials. He is usually their banker and they keep an open account with him, being credited for whatever they furnish and charged with whatever money or supplies he gives them. If they get a little ahead he advises them in making investments, and acts as a friend and counsel in financial affairs. The relations between these commission men and their clients, which sometimes extend over provinces as large as our States, have nothing to resemble them among the working classes of Europe or America. They are the outgrowth of the feudal system, and to the credit of Japan it may be said that the confidence which the working people have placed in their agents has seldom been betrayed. There has not been a fixed price for anything except the staples of the country, but the producers have relied upon the middlemen to represent their interests and get as good prices as possible for their wares, just as a large real estate owner depends upon his agents to rent and sell his property to advantage.

It will be seen that under this system organizations for the purpose of affecting wages and hours of work have not been practicable in Japan, but guilds have been known for several centuries and were introduced by the Dutchmen who occupied the island of Deshima, in the harbor of Nagasaki, the westernmost port of Japan. During the four hundred years that the policy of isolation and exclusion was enforced in Japan these Dutchmen were the only foreigners with whom the inhabitants of the country were allowed to communicate, and the few modern ideas that filtered into the country came through them.

The guild, or association of men who are engaged in the same kind of employment, which originated in Holland, was readily accepted in Japan, and long before the country was open to foreign commerce this system included all trades and occupations. The silk growers and silk buyers, the men who raise tea and those who sell it, the spinners and

weavers, artists and decorators, carpenters, screen makers, confectioners, peddlers, doctors, lawyers, merchants, and even thieves have had guilds to promote their mutual interests. Among the mechanics and tradesmen the guilds have often been extended to include life insurance and aid to those who are ill or infirm, like the mutual benefit societies of the United States. Assessments were made upon the living to pay the doctors who have attended the sick and the undertakers who have buried the dead.

The only trade union that endeavors to control the wages and the working time of its members, so far as I was able to ascertain, in Japan is the Guides' Association, which has its headquarters in Yokohama and includes all of the professional guides and couriers in the Empire. When a tourist lands in Japan and applies at the hotel office or at a bank for a guide, he is directed to the general agency, and the first man on the list is assigned to him. As there are both good and poor, educated and ignorant, amiable and disagreeable, competent and incompetent guides, this assignment is not always satisfactory, but a traveler can always get the guide he wants sooner or later by applying for him. If he happens to be low down on the list his patron must go without a guide or employ someone else temporarily until his name is reached, or he may arrange with the man who stands at the head to sell out his chance for a bonus in cash, or divide fees with him until his turn arrives for regular assignment. This arrangement is often annoying to travelers, but it gives every guide an equal chance, and protects them from the avarice of popular guides and at the same time gives the unpopular ones an equal chance for employment.

The fees charged by guides in Japan are much less than in Europe, the regular terms being 2 yen (\$1) a day, with 50 sen (25 cents) for hotel fare and second-class traveling expenses. Any guide who cuts under these rates or attempts to collect more, is disciplined by the association and often expelled.

There have been but two strikes in Japan. One of these occurred among a railway construction gang, who were hired for certain wages to work six days in the week, and were required to work seven without additional compensation. When their protests were unheeded they laid down their tools, and appealed to the police authorities for the enforcement of the law which makes six days a week's labor, and provides that no employee of the Government or any corporation or private individual shall be compelled to work more than six days in a week without extra compensation. Sunday is the usual day of rest in Japan. Its selection is not due to law nor to religious scruples, but to public convenience and, perhaps, out of respect to foreign nations. When what is known as the six-day law was passed the Government set the example by closing its offices on Sunday, and all other institutions followed suit. That law was originally suggested for sanitary reasons.

The second strike in Japan occurred in Tokyo in the summer of 1895. A party of bricklayers engaged in building a factory near Tokyo had their hours of labor extended from twelve to thirteen because of a desire on the part of the management to complete the job and start the machinery as soon as possible. The men did not object to this increase of time, but asked a corresponding advance of wages, which, as they were getting only 12 cents a day in our money, would have been only 1 cent a day increase for each, or perhaps \$1 a day for the whole gang. But the contractor refused and they quit work. He got other bricklayers to take their places, but they were induced to abandon him also, and as he persisted in his refusal to do what the men considered simple justice it was decided to send emissaries to all the other bricklayers in the city and ask them to join in a sympathetic strike. This attempt to introduce foreign methods into the conservative labor system of Japan was only partially successful. The greater part of the bricklayers employed in the city declined to join, but a thousand or more men, engaged upon the city waterworks, on some railway freight houses and other large structures, quit, and it was several days before the difficulty was adjusted. Public sentiment was aroused by the disturbance, and the contractor who caused the trouble finally compromised with his men and went back to twelve hours' work for twelve hours' pay.

The ancient system of household labor is being rapidly overturned by the introduction of modern methods and machinery. The older artisans are offering a vain resistance and can not be drawn from their antique looms and forges by any inducement that has yet been offered, but the younger generations are rapidly acquiring a knowledge of the use and value of labor-saving machinery and factories are being built in all parts of the Empire. The greatest progress thus far has been made in cotton spinning and weaving, but several iron mills have been established and machine shops are springing up all over the Empire. In four years the new treaties go into effect, when foreigners will be allowed to engage openly in manufacturing enterprises. Then their capital and experience will give a decided stimulus to mechanical industry and the increase in the productive power of Japan will be even more rapid than now.

The first manufactory established in Japan was a cotton mill down in the southwestern corner of the Empire, in the province of Satsuma, which has produced the best pottery and some of the greatest men. Prince Shimazu was its patron. Having learned something of modern arts and sciences from the Dutchmen who were allowed to remain on the island of Deshima, he started a laboratory on his estates in which he learned telegraphy, photography, and how to make glass, coke, and gas for illuminating purposes. A few years later he built a factory near his summer villa, which was half arsenal and half iron foundry. He made guns there and other articles of iron, and experimented with explosives.

All the work in both institutions was conducted under his personal supervision, with the assistance of Dutch chemists, from whom he heard that much could be learned about such matters from books. So he started a retainer to Nagasaki, charged with the duty of securing whatever books on chemistry, natural philosophy, and other scientific subjects could be bought or borrowed. And an order was left with a merchant at Deshima to procure for him a copy of every scientific publication that was issued. In this way a considerable library accumulated, and the books were translated to the prince, as fast as they came, by a schoolmaster who had learned English at Deshima and whose services were secured.

One of the books contained a description of the Arkwright spinning jenny; and the prince was so fascinated that he lost no time in ordering a machine through the Dutchmen. When it came and was operated he decided to introduce it among his people as a substitute for the old-fashioned spinning wheel. He built a stone factory and located a plant of 3,030 spindles, at a cost of 30,000 yen (\$15,000), in a small town called Niriiso, a suburb of Kagoshima. The machines were throstles and mules made by Platt & Bro., of Bradford, who sent an English engineer over to set them up and educate the operatives. The prince treated him like an equal, built him a fine large stone house, which is now the high-school building at Kagoshima, surrounded him with luxuries of every kind, and paid him a handsome salary. As the enterprise was not intended for profit, but for the purpose of introducing the art of spinning among the people, everything was conducted on a most elaborate and expensive scale, and the yarns produced were of superior quality.

As coal, which had to be brought from a neighboring province, was very expensive the prince sent out prospectors to examine his own territory in the hope of finding deposits, but they failed. He then conceived the idea of utilizing water power and commenced the construction of a canal 10 miles long, but the work was suspended at his death and never resumed. His sons took little interest in the enterprise, and soon became involved in the political complications which led to the restoration of the emperor, so the factory passed into the hands of a private citizen for several years, from whom the present prince of Satsuma purchased it.

The next factory was set up by Mr. Kajima, of Tokyo, in 1867, while the country was still disturbed by the war. It originally had but 720 spindles, but now operates 82,000 and is the largest in the Empire. These were the only factories in Japan until 1879, when the Government undertook to encourage such enterprises and established two well-equipped plants in different parts of the country to educate operatives and demonstrate the superiority of modern machinery. It set up four more in 1880, four in 1881, one in 1882, another in 1883, and still another in 1884. They served their purpose, made machine spinning popular,

and have since been handed over to private companies who are operating them with great profit.

The industry has grown so rapidly that, according to statistics gathered by the Osaka board of trade, there are now 61 factories in operation, with 580,564 spindles, employing 8,899 men and 29,596 women. The factories in course of construction, and which will be in operation during the present year, will bring the total number of spindles up to 819,115. Thirty-seven of these factories are at Osaka. The largest in the Empire has 82,000 spindles, and the smallest 1,136. There are four with more than 50,000 spindles, and thirteen with more than 25,000.

Most of the raw cotton used in Japan comes from India and the United States, but very little is shipped direct from the latter country. The import statistics do not disclose this trade. It is merged with that of Great Britain. The value of raw cotton alone imported into Japan in 1894 was \$9,551,961, while the total imports from the United States are given as \$5,491,279. More than one-half, probably two-thirds, of that cotton was reshipped at Liverpool to Japanese ports, with an additional charge to allow a profit for the middleman. The freight on cotton by sailing vessels from the southern ports of the United States around the Horn would not be more than \$6 a ton, while the rate by steamer via England is about \$8. Therefore it is difficult to understand why shipments are not made direct. The only explanation seems to be that cotton exporters in the United States are not aware of the extent of the market in that country.

The same is true to a certain degree as to iron. There is plenty of poor iron ore in the northern provinces of Japan which might be utilized for certain purposes if mixed with a better quality, but it is comparatively useless as it is, and pig iron imported from England, Russia, and Norway costs about 40 yen (\$20 gold) a ton in Yokohama. There are two furnaces in Japan that might be used for smelting with profit if properly managed, but it would be much cheaper to bring the iron from the United States in pigs than in the ore.

The first genuine foreign factory to be established in Japan is the Osaka Tokei Seizo Kubushiki Kwaisha, familiarly known as the American Watch Company. It was started on January 1, 1895, and turned out its first finished watch on April 10. The organizer and promoter of this company was Mr. A. H. Butler, of San Diego, Cal., who took an outfit of watch-making machinery to Japan and induced a number of jewelers and watch dealers in Osaka to furnish \$160,000 capital to pay the cost of a building and the running expenses of the business. The company is incorporated under Japanese law, and the stock is all in the names of Japanese citizens, although 140 of the 300 shares actually belong to Mr. Butler and his associates.

As no foreigner is allowed to engage in manufacturing outside of certain limited districts in the treaty ports of Japan, until the new

treaties go into effect in 1899, it was necessary for Mr. Butler to evade the law, which he did, with the knowledge and consent of the authorities, by having his stock issued in the name of Japanese trustees, who assigned to him the certificates in blank and gave him a written agreement to protect his interests. At the end of four years Mr. Butler will have the stock registered in his own name and become an officer of the company.

Japanese architecture is not suitable to factory work that requires a great deal of light and protection from wind and weather, and therefore it was necessary to erect a new building of brick upon the American plan, 240 by 40 feet in size, with an abundance of windows.

In the meantime the machinery was set up in temporary quarters and a number of men and boys, who had already been engaged in repairing and manufacturing hand-made watches and clocks, were assembled to be educated by P. H. Wheeler, the superintendent, and his assistants. Mr. Wheeler had worked in Elgin, Rockford, and Springfield, Ill., and in Columbus, Ohio. He brought with him from America nine experts, who, like himself, have contracts for three years and an option of renewal for three years longer at the end of the first term. They are as follows: From Elgin, F. M. Clark and William Keene; from Rockford, T. Schnarke; from Springfield, L. Sylvester, E. V. Goodman, and Charles Gassler; from Columbus, H. Barbier, S. B. Finch, and George Flick.

These gentlemen say that their Japanese students show very great aptitude and skill, and that they learn much more rapidly and have a much more delicate touch than persons of similar intelligence and condition in the United States. Nearly all of them had some experience in making or repairing watches and clocks before they came into the factory, and a few had used hand machines for drilling, polishing, and that sort of work; but the modern machinery at which they were placed was entirely new to them. They are mostly young men, aged from 18 to 30. As none of them can understand a word of English, and none of the American experts could speak Japanese when they arrived, the work of instruction might have been very slow but for the keen perception of the pupils.

It is difficult to explain a proposition to the Japanese, but their power of imitation is so well developed that the easiest way to teach them is to go through the process yourself and let them watch you. Almost instantly they are able to repeat it, and will continue to do so until the end of their days without the slightest variation. Another difficulty in this school of instruction was the absence of words in Japanese to describe the machinery and the parts of the watch, but the English terms were adopted and are now exclusively used.

The highest wages paid to the skilled native workmen in the factory are only 40 sen a day, which is equivalent to 20 cents in our money. The lowest wages are 10 sen (5 cents) a day, while in American factories the

same labor would be paid from 50 cents to \$5 a day. The capacity of the factory when fully in operation will be 150 watches a day, and owing to the low price of labor they can be sold with a profit for 50 per cent less than the market price in the United States and Europe.

The following statement shows the rates of wages per day paid to Japanese artisans and laborers: (a)

DAILY RATES OF WAGES, JAPAN.

Occupation.	Highest.	Lowest.	Average.
Blacksmiths	\$0.60	\$0.18	\$0.30
Bricklayers .....	.88	.20	.33
Cabinetmakers (furniture) .....	.53	.17	.30
Carpenters .....	.50	.20	.30
Carpenters and joiners (screen making) .....	.55	.17	.30
Compositors .....	.83	.10	.29
Coolies or general laborers .....	.33	.14	.22
Cotton beaters .....	.45	.13	.23
Dyers .....	.60	.05	.25
Farm hands (men) .....	.30	.16	.19
Farm hands (women) .....	.28	.06	.19
Lacquer makers .....	.58	.15	.29
Matting makers .....	.50	.20	.30
Oil pressers .....	.34	.16	.25
Paper hangers .....	.60	.20	.31
Paper screen, lantern, etc., makers .....	.55	.20	.31
Porcelain makers .....	.50	.13	.29
Pressmen, printing .....	.70	.11	.26
Roofers .....	.60	.20	.29
Sauce and preserve makers .....	.40	.10	.24
Silkworm breeders (men) .....	.50	.10	.22
Silkworm breeders (women) .....	.25	.05	.17
Stonecutters .....	.69	.22	.36
Tailors, foreign clothing	1.00	.25	.49
Tailors, Japanese clothing .....	.56	.15	.28
Tea makers (men) .....	.80	.15	.31
Tobacco makers .....	.50	.11	.26
Weavers .....	.40	.07	.15
Wine and sake makers .....	.50	.15	.29
Wood sawyers .....	.50	.13	.30

The following are the rates of wages paid by the month: (a)

MONTHLY RATES OF WAGES, JAPAN.

Occupation.	Highest.	Lowest.	Average.
Confectionery makers and bakers	\$12.00	\$1.00	\$5.74
Weavers (men)	12.00	1.00	4.83
Weavers (women)	12.00	1.00	3.30
Farm hands (men)	5.00	1.00	2.31
Farm hands (women)	3.50	.49	1.28
House servants (men)	5.00	.50	2.12
House servants (women)	3.00	.59	1.16

a Values stated in American gold on the basis of 2 silver yen to the dollar.

The following are the present rates of wages paid in the city of Yokohama for an average working day of ten hours:(a)

DAILY RATES OF WAGES PAID IN YOKOHAMA.

Occupation.	Rate per day.	Occupation.	Rate per day.
Blacksmiths	\$0.36	Porcelain makers ^s	\$0.24
Carpenters.....	.26	Pressmen, printing offices.....	.19
Carpenters, ship .....	.29	Roofers.....	.26
Compositors .....	.29	Sake brewers .....	.22
Confectionery makers and bakers .....	.17	Sauce and preserve makers.....	.24
Cotton beaters.....	.17	Screen makers.....	.26
Dyers.....	.24	Silk spinners (female).....	.17
Joiners .....	.29	Stonecutters .....	.31
Laborers, ordinary.....	.19	Tailors, foreign clothing.....	.48
Lacquer makers .....	.24	Tailors, Japanese clothing.....	.24
Matting makers .....	.24	Tea-firing men.....	.14
Oil pressers.....	.24	Tea-firing women.....	.10
Paper hangers .....	.24	Tea pickers.....	.29
Plasterers .....	.26	Tilers.....	.31
Porcelain artists, ordinary.....	.38	Tobacco and cigar makers.....	.24
Porcelain artists, superior .....	.72	Wood sawyers.....	.29

The following are the rates of wages paid by the month:(a)

Farm hands (men)	\$1.44
Farm hands (women)	1.20
Silkworm breeders (men).....	1.92
Silkworm breeders (women).....	.96
Weavers (women).....	.96
House servants (men)	2.80 to 7.20
House servants (women)	2.40 to 4.80

Factory labor is paid even less than these prices. Middleton & Co., one of the most prominent tea-shipping houses in Japan, employ in their establishment a large number of persons, men and women, who work from 5 o'clock in the morning until 6 o'clock at night, with three intervals at 8, 12, and 3 o'clock, respectively, when they eat their rice and what other refreshments they bring with them and rest for twenty minutes or a half hour. The highest wages paid by the Messrs. Middleton are 42 sen a day, which is equivalent to 21 cents in United States currency. This is received by men who are experts in handling tea, and have acquired their proficiency by natural ability and long years of experience.

The lowest wages are paid to young boys and girls who pick over the tea leaves to remove the stems and other foreign substances. They receive 13 sen (6½ cents) a day for about twelve hours' work, not including their resting spells.

Of the entire force in the establishment 20 are paid 21 cents (United States currency) a day, 90 are paid 18 cents, 50 are paid 15 cents, 335 are paid 12 cents, 278 are paid 10 cents, 5 are paid 9 cents, and 30 are paid 6½ cents—and they board themselves.

The same rates are paid in all the tea "go downs," as they are called, and similar wages in the factories and manufacturing establishments throughout the country.

a Values stated in American gold on the basis of 2 silver yen to the dollar.

Embroidery women, who make the work that is so much prized by Americans and Europeans for decorative purposes, seldom receive more than 15 or 20 cents a day in our money, although in any other land they would be estimated as artists.

The wages paid in Yokohama are the highest in the Empire, because it has a large foreign population. Money has a smaller value to foreigners and they are not such close traders as the natives. In that city the ordinary patrolmen of the police force are paid 8 yen, or \$4 in our money, a month. Sergeants receive \$6 and the other officials of higher rank a corresponding amount. Ordinary firemen get \$3.50 a month, foremen of hose carts \$7, and engineers of steam fire engines, who are supposed to possess the highest grade of talent, receive \$12 a month. All are furnished two suits of clothing a year, one for summer and one for winter, and an overcoat. Night watchmen, who go about the premises of citizens, in addition to the regular police, as a safeguard against fire and burglars, get \$4 a month. They patrol the districts on which they are employed from dark to daylight, and are paid by their patrons, although licensed by the city and sworn in as special police.

There has been some rise in wages in the cities since the opening of the war because of the scarcity of labor. Coolies who work as stevedores, loading and unloading vessels, get 30 cents a day now for working from 6 o'clock in the morning till 6 o'clock at night, where they formerly received 25 cents. Professional gardeners—and in Japan landscape gardening has been a science and an art for 600 years—get \$10 and \$12 a month. Telegraph messengers and postmen are paid \$6 and \$8, respectively, and are furnished a uniform.

Every man has his business or the name or trade-mark of his employer stamped or embroidered upon his kimono—the loose tunic which all Japanese men and women wear. If he is a carpenter or a bricklayer, or if he is a porter in a store or a tea dryer, he wears that fact emblazoned in large characters upon his back or upon what corresponds to the lapels of his coat. If he is a footman or a coachman in a private family he has its coat of arms or monogram upon his kimono in the middle of his back, or if he is driving for a livery stable he will carry its advertisement around with him in a similar form.

Investments are as safe in Japan as anywhere else in the world, although there is comparatively little foreign capital represented. All the railroads, which now represent a total of about 3,000 miles and a capital of \$75,000,000, were built with local money. Not a dollar was borrowed abroad, and there are very few shares or bonds of Japanese corporations held by foreign investors. At the same time the people are not rich. There are very few men of large fortunes. I was told by a Tokyo banker that he knew of only two millionaires in Japan. One made his money in coal mining and the other is the principal owner of a great steamship company which has 100 vessels in its service and a monopoly of the coasting trade. But there are many

men with small fortunes, and although wages are very low nobody is very poor. There is not an almshouse in the entire country, and you never see a beggar on the street. Occasionally some poor leper stretches out his hand as you enter one of the gilded temples, but there isn't a country in Europe or America so free from street begging as Japan.

The people as a rule are frugal and economical, and manage to save a little even when they are working for 10 cents a day. They have few wants and are temperate. You never see a drunken man in the street. I spent four months in Japan and visited five of the principal cities. The only intoxicated people I saw were a party of young fellows dressed in fantastic costumes who were in a boat sailing down the river in Osaka. The city had been given over to great ceremonies and rejoicings on the return of the soldiers it sent to the war, and these young men—five or six of them—were continuing their celebration another day.

This sobriety is due to the use of tea instead of liquor as a beverage. Tea houses in Japan take the place of saloons and are about as numerous in the large cities as barrooms in New York or Chicago. But a pot of tea that will entertain an entire family can be bought for 2 sen (1 cent), which cheers and strengthens quite as much as malt or alcoholic liquors. The use of beer is, however, increasing so rapidly in Japan as to excite apprehension, and the Government is making it the subject of an inquiry. There is a brewery or two in nearly every city of size, and beer can now be bought at almost every tea house.

The new treaty which was negotiated by Secretary Gresham and Minister Kurino last winter at Washington makes Japan as free for foreigners as the United States, with the exception that they can not own real estate, and by a straight reading of the text it would seem that that is not prohibited. It provides that foreigners may trade by wholesale or retail, singly or with native partners, and says that they "may own, hire, and occupy houses, manufactories, warehouses, shops, and premises, and lease land," conforming, of course, to the laws and police regulations that apply to them and the natives of the country alike.

The treaty also provides that foreigners shall enjoy all rights and privileges enjoyed by natives "in whatever relates to residence and travel, to the possession of goods and effects, to the succession to personal estate and the disposition of property;" that they shall not be required to pay any higher taxes, imposts, or other charges than natives; that they may freely enjoy their own religion, bury their dead according to their own rites, and shall be exempted from military service, forced loans, and all other exactions. No higher duties are to be imposed upon the products of the United States than upon those of the most favored nation, and there must be perfect equality in the treatment of Americans and natives in the exportation of merchandise. The coasting trade, as is customary in all countries, is withheld

for the benefit of the citizens of Japan, but American vessels laden with cargoes for more than one port are allowed to load and unload wherever they like. The same protection is afforded to natives and foreigners in patents and trade-marks, which is a very good thing, because at present there is no patent treaty between the two countries and the Japs are stealing our inventions.

The foreign settlements, which are now subject to the jurisdiction of the consuls of the different countries, are to be incorporated into the municipalities which they adjoin, and the consuls will yield control to the local officials.

Until now Japan, like China, Turkey, Egypt, and other countries which have not reached a high degree of civilization, has been subjected to what is called the doctrine of extraterritoriality. That means that the citizens of the United States or England or any other civilized nation residing in those countries are subject to their own laws, administered by their consuls, and not to the local authorities or courts. If an American commits a crime in Japan to-day he is tried before the United States consul-general, according to the laws of the United States, and not by the courts and laws of Japan. The same is true of citizens of European nations. If a Japanese citizen commits a crime against an American he is tried by the local authorities. The general rule in civil as well as criminal cases is that the defendant shall be tried under the laws of his own country, and the plaintiff brings his suit accordingly.

But Japan thinks she is sufficiently civilized to administer justice to foreigners, and has long demanded release from the extraterritoriality restriction.

There is no protection for foreign patents in Japan, but any article or instrument or machine that comes into the country or that is seen abroad may be manufactured without interference or the payment of royalty; but no Japanese can obtain a patent upon a foreign invention. He must show that his idea is not only original in Japan but original with him, and if it appears thereafter that he is mistaken or has practiced a deception his patent is canceled. The processes and implements used in all the industries of Japan have been inherited from generations far removed, and nearly all of those recently adopted are copied from foreign models.

There has been little inducement for the development of inventive genius in Japan until recently, and the greater part of the applications already filed in the patent office have been for trifles, like children's toys or improvements or changes in foreign methods and machinery to make them more useful in that country.

I asked Mr. Matsudiarra, the chief examiner of the patent office, at Tokyo, whether the introduction of common schools and compulsory education had improved labor.

"That is difficult to say," he replied, "but so far as I have observed education is not improving labor. The little education that the com-

mon people receive in the public schools makes them abhor labor. It has always been the custom in Japan for families to follow the same trade or occupation for centuries after centuries, but when a boy receives an education superior to that of his father he seems to feel that the old mode of life and avocation are not good enough for him. If he is a farmer's son he wants to live in the city, and if he is the son of a mechanic he wants employment under the Government or some less laborious occupation than his family have followed. But I believe the Japanese are not peculiar in this respect. I think it is the rule all over the world that when a man acquires learning he wants to advance in other respects also and better his condition."

While the Japanese will soon be able to furnish themselves with all they use and wear and eat without assistance from foreign nations, they will be compelled to buy machinery and raw material, particularly cotton and iron. Therefore our sales will be practically limited to those articles. And the market for machinery will be limited as to time. The Japanese will buy a great deal within the next few years, almost everything in the way of labor-saving apparatus, but they are already beginning to make their own machinery, and in a few years will be independent of foreign nations in that respect also. Another important fact—a very important fact—is that they will buy only one outfit of certain machinery. We will sell them one set, which they will copy and supply all future demands themselves. This will go on until the new treaties take effect, when American patents will be protected.

They have very little wood-working machinery; and very little shoe-making machinery, for the people do not wear shoes. The same is true of knitting machinery, for they do not wear hosiery. I do not think that more than 20,000 out of the 41,388,313 people who compose the population of Japan wear shoes and stockings. Ninety per cent go barefooted and barelegged, women, children, and men, protecting their feet from the stones by wooden and straw sandals. The higher classes have the same sort of foot gear, but it is made in a more finished manner, and they wear little cloth affairs that they call "tabis" upon their feet. These are made of white or blue cotton, and do not go above the ankle bone. But the use of shoes and hosiery is increasing, and the people will grow into it as they have grown into other foreign notions.

Lumber is worth about twice as much in Japan as it is with us. Common lumber, which we sell for \$10 and \$12 a thousand feet, will bring 40 yen (\$20 gold) there. This is due chiefly to the scarcity of timber and the great labor required to work it up by their primitive processes. They have been cutting timber off their mountains for 2,500 years, and although the forests have been reproduced again and again during that period it is difficult and expensive to get logs down from the mountain side in the absence of the necessary facilities. The lum-

bermen usually go into the woods and cut one log at a time, which they haul out by hand or by oxen for many miles. Where streams are convenient they use them for floating timber as we do, but they have no sawmills in the mountains, although there is an abundance of water power everywhere.

They cut all their lumber by hand with a wide and thin saw during the seasons of the year when they have nothing else to do, and each man who is engaged in business that requires lumber usually buys his own logs and cuts them up himself at odd times. Women and men both work at it. One man or woman will work on the top of the log while another works underneath, but usually not with the same saw. I have seen four or five men working on the same log, each sawing off his own board. They raise the log at an incline of 45° , with one end on the ground and a rest about the middle, and when they work down to the rest they tie the strip to the log and begin at the other end again.

All the lumber is dressed by hand. There is but one planing mill in the country; that is in Yokohama. It employs about 150 hands, and, curiously enough, its entire product is made into boxes and shipped to India. It does no business in the local market. The machinery is from Boston. The manager is thinking of enlarging the plant by adding a sash factory and machinery for making blinds and doors, also for the India market. I do not know why they do not sell their goods in the local market, but I presume there is a good reason for it; perhaps they get better prices in India.

The Japanese make all the woodwork about their houses by hand, and most of their houses are entirely of wood. They are very skillful in all kinds of cabinet and joiner work, and more rapid than our people. Their hand-made tools are better adapted for doing close work than ours, and are kept very sharp. Besides, they give a great deal more labor and patience to an article than our carpenters and cabinetmakers. You never see scratches from nicked tools on their planed work. They use very few nails, but mortise almost everything. It is usually so well done that it is difficult to detect the joints except by the grain, and it lasts forever. Some of their ships are made without a bit of iron in their composition. Everything is mortised.

Japan is one vast garden, and as you look over the fields you can imagine that they are covered with toy farms where children are playing with the laws of nature and raising samples of different kinds of vegetables and grain. Everything is on a diminutive scale, and the work is as fine and accurate as that applied to a cloisonné vase. What would an Illinois or an Iowa farmer think of planting his corn, wheat, oats, and barley in bunches, and then, when it is three or four inches high, transplanting every spear of it in rows about as far apart as you can stretch your fingers. A Japanese farmer weeds his wheat fields just as a Connecticut farmer weeds his onion bed, and cultivates his

potatoes and barley with as much care as a Long Island farmer bestows upon his asparagus or mushrooms or his flowers.

When grain is ripe it is cut with a sickle close to the ground. The bottom ends are carefully tied together with a wisp of straw; the bunch is then divided and hung over a bamboo pole or a rope, like Monday's washing, to dry, sometimes in the field and sometimes in the back yard, and even in the street in front of the house. When it is thoroughly cured the heads of grain are cut off with a knife, and the straws are carefully bound up and laid away in bundles. The heads are then spread out upon a piece of straw matting and beaten with a curious old-fashioned flail. Another method of thrashing is to take handfuls of straw and pull them through a mesh of iron needles. After the thrashing is done the grain is taken up in a sort of scoop basket made of bamboo, and shaken by one woman who holds it as high as her head, while another woman stands by with a large fan which she waves rapidly through the air and blows the lighter chaff away from the heavier grains as they are falling. The richer farmers have separators built upon a primitive plan and turned with a crank. People often winnow grain by pouring it from a scoop upon a fan 3 or 4 feet wide, upon which it is tossed gently up and down, so as to leave the chaff in the air when it falls. Another method of thrashing is to beat the heads of grain upon a board or a row of bamboo poles.

In passing through country districts in a carriage or jinrikisha one finds the greater part of the roadway preempted by the farmers of the neighborhood for the purpose of drying their grain, which is spread out in thin layers upon long mats and raked over every now and then by an old woman in order that the particles at the bottom may get their share of the sun. The straw, which is still tied together in bunches, is hung over racks along the roadside during the day and carried under shelter at night to protect it from dampness as well as from thieves. Sometimes the racks are 30 or 40 yards long and 18 feet high, with a series of poles, and the farmer's wife or one of his daughters comes along at intervals to inspect the straw to see that it is curing evenly, for it is almost as valuable as the grain.

Every particle of straw is saved, and it is put to many uses. They make of it hats, shoes, ropes, roofs, matting, the partitions and floors of houses, water-proof coats, baskets, boxes, and a thousand and one other useful articles. They braid it for fences, too, and the finer, softer qualities are cut up for fodder.

There is little hay raised in Japan. The grass is wiry and indigestible. It cuts the intestines of animals. Some alfalfa is grown, but it does not prosper. In the neighborhood of Kobe, which is one of the seaports on the southern shore, the soil seems to be better adapted for hay, and the best beef comes from that locality.

The ordinary Japanese horse, which originated in China and is called a griffin, seems to like straw and thrives upon it, but he is small and

ugly, and is not capable of much endurance. He resembles the Texan broncho in appearance, but a journey of 15 miles will use him up. They chop the straw very fine for feeding purposes, mix it with oats, barley, millet, and other grains, and by adding water make a kind of mush. Oxen are given the same food, and in some portions of the country one sees a good many of them. They draw their loads by ropes stretched from a collar to the axle of the two-wheeled cart. One man leads them by cords attached to rings in their noses, while another steers the vehicle with a tongue that sticks out behind.

On rare occasions you find a man plowing with a cow or an ox, but more frequently with man or woman power. The Japanese plow is a section of the trunk or the branch of a young tree with a proper curve to it, and is all wood except a narrow, pointed blade, fitted into the framework. It has only one handle.

Every variety of agriculture is carried on in a manner similar to that described, and the soil is in constant use. A couple of acres is considered a large tract of land for farming purposes. Most of the farms are of smaller area, and the crops are greatly diversified. Upon such a little spot of land will be grown almost everything known to the vegetable kingdom; a few square feet of wheat, barley, corn, and millet; a plat of beans perhaps 10 feet wide by 20 feet long, an equal amount of potatoes and peas, then a patch of onions, about as big as a grave; beets, lettuce, salsify, turnips, sweet potatoes, and other varieties of cereals and roots occupy the rest of the area.

The farmer looks upon his growing crop every morning just as an engineer will inspect the movements of his machinery, and if anything is wrong remedies it. If a weed appears in the bean patch he pulls it up; if a hill of potatoes or anything else fails it is immediately replanted. And when he cuts down a tree he always plants another to take its place. The artificial forests of Japan cover many hundreds of square miles, and by this accuracy, economy, and care the prosperity of the country is permanently assured. As one crop is harvested the soil is worked over, fertilized, and replanted with something else.

The largest area of agricultural land in Japan is devoted to raising rice, perhaps as much as nine-tenths of the whole, and as that crop requires a great deal of water, the paddy-fields are banked up into terraces, one above the other, and divided off into little plats 25 or 30 feet square, with ridges of earth between them to keep the water from flowing away when they are flooded. All farming lands are irrigated by a system that is a thousand years old. Some of the ditches are walled up with bamboo wickerwork and some with tiles and stone.

The farmers live in villages and their farms are detached, sometimes a mile, or 2 and 3 miles, away from their homes. There are no fences or other visible marks of division, but every man knows his own land, for it has been in his family for generations. Irrigating ditches and little paths are usually the boundary lines. Theoretically all the land

belongs to the emperor, but the greater part of that under cultivation has been held by fee simple, and the title descends from the father to the oldest son. Sales are made and recorded very much as they are in this country, and land is mortgaged to secure loans. The actual value of every acre is fixed upon the assessor's book for taxation purposes.

The official statistics of Japan show that there are 11,400,008 men and 10,948,053 women engaged in agriculture, which is nearly one-half the total population.

The tools used in the cultivation of the ground are peculiar to Japan and quite curious. Most of them are homemade and have never been imitated by foreign manufacturers. The farmers employ their winter evenings and stormy days in making new implements and repairing old ones, with a little aid from the neighboring blacksmith or traveling tinker. Many men make a business of traveling from village to village during the winter with a small portable forge to assist in repairing tools for the next season.

The workingmen of Japan have no reason to complain that the women do not carry their half of the load. Whatever may be the position of the gentler sex in the household, although she is not allowed to hold property or share in the responsibilities that are usually divided between husbands and wives in America, she is at least admitted to an equality with men when there is any hard work to be done. Wherever you go, in the cities or villages or the farming communities, you find the wife and mother working side by side with the husband and sons, plowing, planting, and reaping, and at sunset taking home a large portion of the harvest in a big basket on her back. Whenever you see a man between a pair of tiny shafts tugging to haul a heavily loaded cart uphill there is always a woman pushing from behind, bareheaded and barefooted, except for a pair of straw sandals, and wearing a pair of blue cotton leggings like tights extending from her waist to her ankles. Sometimes the baby is playing with a few rude toys on top of the load. Sometimes he is strapped to her shoulders and his head drops from one side to the other with every motion of her body until you fear it may fall off.

Silk and tea, the two chief exports of Japan, are raised almost entirely by the labor of women, and in the mechanical arts she appears to participate equally in the labor, although she gets little or none of the credit. Her deft fingers fashion many of the choicest pieces of cloisonné and the ceramics, and in the decoration of lacquer that which comes from her hands is equal and often superior to the work of men. She weaves mats and other articles of straw, she braids bamboo baskets, and a thousand and one other articles that are made from that useful tree. She goes out with her husband in fishing boats and dries and salts the catch he brings home; she assists in house-building and cabinetmaking, and in various other occupations which

in the western countries are not considered suitable to her sex, she does almost everything that man can do quite as well and as rapidly as he, although her wages in every employment are only a little more than half of his. She is always present in the shops and stores, usually as bookkeeper and cashier. Some of the largest stores are managed by women and a few are owned by them. And, although the laws and social regulations of the country prohibit it, sometimes you find a woman whose force of character defies both courts and customs and directs the financial affairs and the business of her family as well as the matters that pertain to the household.

RECENT REPORTS OF STATE BUREAUS OF LABOR STATISTICS.

COLORADO.

The Fourth Biennial Report of the Bureau of Labor Statistics of Colorado is for the years 1893 and 1894. The introduction consists largely of a description of the new State capitol, and the address of the Commissioner to the Industrial Congress assembled at Denver in July, 1894. The subjects treated in the report may be grouped as follows: Farms, homes, and mortgages, and manufactures, 8 pages; cost of producing silver and facts relating to smelter production, 14 pages; wages, incomes, living expenses, and prices, 189 pages; strikes, 25 pages; Labor Commissioners' reports and what they contain, 60 pages; miscellaneous matter, 133 pages.

The presentation under each of these titles, with the exception of the cost of producing silver, smelter production, and strikes, consists, principally, of systematic compilations from numerous publications on statistical and sociological subjects.

COST OF PRODUCING SILVER AND FACTS RELATING TO SMELTER PRODUCTION.—The cost of production is shown for the two principal silver-producing districts of the State, and is accompanied with a statement of the product of the smelting plants and smelter and mine wages. The State, in 1892, produced 24,000,000 ounces of fine silver, or over 58 per cent of the total production of the United States.

STRIKES.—A brief statement is given of the strikes and labor troubles occurring in the State during 1893 and 1894. The account of the different strikes is followed by the conclusions and recommendations of the commission appointed to investigate the Chicago strike of June–July, 1894.

It is stated in the address above referred to that in March, 1893, a canvass of Colorado towns was made in order to ascertain the number of unemployed in the State. The returns showed an aggregate of about 8,000 persons, male and female, out of employment. This number probably represented the normal unemployed in the State at that season of the year. After the decline in silver, in June, a further canvass showed that during the sixty days ending with August 31, 1893, the number had increased to 45,000, and of these 22,500 were reported as having left the vicinity where they were employed.

ILLINOIS.

The Eighth Biennial Report of the Bureau of Labor Statistics of Illinois, 1894, contains 430 pages, devoted to a discussion of the subject of taxation, and an appendix, comprising 59 pages. The appendix con-

tains an account of the coal miners' strike of 1894, which is accompanied with statistical tables showing by districts names of operators and location of mines, number of mines involved, number of miners suspending work, etc., number of days suspended, and conditions under which work was resumed. The decision of the supreme court of the State, declaring void section 5 and part of section 10 of the factory inspection law of the State, is given in full; also the address of Mrs. Potter Palmer at the opening of the Woman's Building at the World's Columbian Exposition and the address of Governor John P. Altgeld to the graduates of the University of Illinois.

TAXATION.—In introducing the subject of taxation the purpose of the report is stated to be to expose existing methods in Illinois with special reference to their effect upon labor interests, and to recommend such reforms in the tax system of the State as may tend to ameliorate the condition of the laboring class. The scope, power, and duties of the bureau, the present condition of workingmen, the causes of industrial poverty, and the different schemes of taxation are reviewed.

The general property tax is the system in vogue in Illinois, and the city of Chicago is selected as the central field of the investigation.

The taxation of personal property is treated separately from that of real estate. The statutes of the State require personal property to be listed yearly. The assessor is empowered to swear and examine the party making the report, and in case of a refusal to make a return he is required to list the property to the best of his ability. The following statement gives the totals of a series of tables introduced to show the extent of the undervaluation of the moneys, credits, etc., of banks (other than national), bankers, brokers, and others, also the capital stock of State and national banks in Cook County:

ASSESSED VALUE OF MONEYS, CREDITS, ETC., 1894.

Items.	Cook County.	The State, exclusive of Cook County.	The State.
Population, census of 1890.....	1, 191, 922	2, 634, 429	3, 826, 351
Bankers, brokers, and stockjobbers:			
Moneys	\$43, 925. 00	\$3, 076, 630. 00	\$3, 120, 555. 00
Per capita value.....	. 037	1. 168	. 816
Credits.....	10, 000. 00	1, 553, 583. 00	1, 563, 583. 00
Per capita value.....	. 008	. 590	. 409
Persons other than bankers, brokers, and stockjobbers:			
Moneys	434, 244. 00	7, 335, 114. 00	7, 769, 358. 00
Per capita value.....	. 364	2. 784	2. 030
Credits.....	522, 110. 00	10, 821, 255. 00	11, 343, 365. 00
Per capita value.....	. 438	4. 108	2. 965
Shares of capital stock, State and national banks.....	357, 353. 00	a3, 347, 411. 00	3, 704, 854. 00
Per capita value.....	. 300	a2. 037	. 968
Shares of capital stock of companies not incorporated in Illinois.....	1, 280. 00	b86, 888. 00	98, 927. 00
Per capita value.....	c. 005	b. 187	d. 035
Investments in real estate (money secured by deed).....	6, 275. 00	184, 582. 00	e191, 857. 00
Per capita value.....	. 005	. 070	. 050

a For 54 counties; 2 counties, Effingham and Macoupin, show \$40 and \$50, respectively, which is included in the total for the State; 45 counties make no returns.
b For 14 counties; 25 counties report a total of \$10,759, which is included in the total for the State; 62 counties make no returns.
c Figures here apparently should be \$0.001; those given are, however, according to the original.
d Figures here apparently should be \$0.026; those given are, however, according to the original.
e Figures here apparently should be \$190,857; those given are, however, according to the original.

Items similar to those given in the above statement are shown for a number of selected counties in comparison with Cook County. As further illustrative of the undervaluations in Cook County, tables are presented which show that according to the report of the State auditor the net taxable credits and moneys of 27 State banks in Chicago, on June 5, 1893, amounted to \$1,058,105.25 and \$18,991,771.67, respectively, while the amounts of these items listed for taxation, May 1, 1894, by all the banks in the city (national banks excluded) amounted to \$10,000 and \$43,925, respectively.

The following statement shows the value of the capital stock and surplus fund of State and national banks, the former as reported to the State auditor June 5, 1893, and the latter as reported to the Comptroller of the Currency, May 5, 1893; also the assessed valuation for 1893:

ACTUAL AND ASSESSED VALUE OF CAPITAL STOCK AND SURPLUS FUNDS OF BANKS IN CHICAGO, 1893.

Kind of bank.	Capital stock and surplus fund.		Per cent of assessors' valuation of reported value.
	Values reported to State auditor and Comptroller of the Currency.	Assessors' valuation.	
Eighteen State banks.....	\$16,387,000	\$1,485,000	9.06
Eighteen national banks.....	30,504,000	4,771,050	15.64
Total.....	46,891,000	6,256,050	a 11.21

a Figures here apparently should be 13.34; those given are, however, according to the original.

The undervaluation of certain classes of personal property in Cook County is shown by a comparison of their valuations with those of similar property in the other counties of the State. The following statement summarizes the totals for some of the classes:

AVERAGE ASSESSED VALUE OF MISCELLANEOUS PERSONAL PROPERTY, 1894.

Class of property.	Cook County.			The State, exclusive of Cook County.			The State.		
	Num-ber.	Persons to each.	Aver-age value.	Num-ber.	Persons to each.	Aver-age value.	Num-ber.	Persons to each.	Aver-age value.
Fire and burglar proof safes.....	397	3,002.32	\$29.60	9,967	264.32	\$21.54	10,364	a 327.10	\$21.84
Steam engines and boilers.....	643	1,853.69	204.91	9,536	276.26	b 125.24	10,179	375.91	130.37
Pianos.....	11,930	99.91	28.39	31,757	82.96	30.24	43,687	87.59	29.74
Watches and clocks.....	7,597	156.89	3.78	326,016	8.08	1.94	333,613	11.47	1.98
Sewing and knitting machines...	5,232	227.81	4.47	223,315	11.80	c 3.95	228,547	16.74	3.98
Billiard and pigeonhole tables....	154	d 7,739.10	e 22.00	1,911	1,378.56	19.09	2,065	1,852.95	19.31

a Based on the population of 1890 (3,826,351), the figures here should be 369.20; those given are, however, according to the original.

b Based on a total value of \$1,195,310, the figures here should be \$125.35; those given are, however, according to the original.

c Based on a total value of \$887,036, the figures here should be \$3.97; those given are, however, according to the original.

d Based on the population of 1890 (1,191,922), the figures here should be 7,739.75; those given are, however, according to the original.

e Based on a total value of \$3,385, the figures here should be \$21.93; those given are, however, according to the original.

The assessed value of the personal property of saloons and eating houses in the State was reported at \$239,558, in Cook County at \$13,483, and in the State exclusive of Cook County at \$226,075. The per capita values were \$0.063, \$0.011, and \$0.086, respectively.

The main features of the branch of the investigation relating to real estate consist of statistics of the actual and the assessed value of property located in what is known as the old city limits of Chicago, the North, South, and West divisions of the city being treated separately. The different divisions are described as follows: The West division is distinctively a home region for working people and those of moderate means; the South division, besides being the residence section of most of the wealthy people of Chicago, embraces the great business center; the North division is the home of people who are ordinarily ranked as neither rich nor poor. The laws of the State require each tract or lot of real property to be valued at its fair cash value, estimated at the price it would bring at a fair voluntary sale. Assessors are directed to actually view and determine, as nearly as practicable, the fair cash value of each tract or lot of land improved, the value of each tract or lot of land not improved, and the total value.

The extent of the undervaluation for the purpose of taxation is first illustrated by a series of tables, that compare the cost of buildings erected during a number of years, as shown by the building permits, with the assessed value of all real estate. The following statement summarizes the general results of the comparison:

COST OF BUILDINGS AND ASSESSED VALUE OF ALL REAL ESTATE IN CHICAGO.

Items.	Division of city.			Total.
	North.	South.	West.	
Buildings erected, 1876 to 1893.....	8, 569	14, 619	40, 113	63, 301
Cost	\$68, 718, 157	\$174, 817, 633	\$174, 608, 812	\$418, 144, 602
Average cost.....	\$8, 019. 39	\$11, 958. 25	\$4, 352. 92	\$6, 605. 66
Per cent of total cost.....	16. 43	41. 81	41. 76	100. 00
Assessors' valuation, all real estate, 1893.....	\$15, 744, 560	\$64, 364, 142	\$43, 637, 130	\$123, 745, 832
Per cent of cost of buildings.....	22. 91	36. 82	24. 99	29. 59
Cost of buildings erected, 1890, 1891, and 1892..	\$15, 500, 000	\$62, 628, 875	\$51, 235, 375	\$129, 364, 250
Per cent of assessed value of all real estate, 1893.....	98. 45	97. 30	117. 41	104. 54

Leaving out entirely the buildings erected prior to 1876 and still standing in 1893, and omitting land values altogether, the assessment valuation in 1893 of both land and improvements was less than one-third of the cost of the buildings for which permits were granted after the close of 1875.

A description is given of seventy of the costliest commercial buildings of the city, with the true and the assessed value of the land and the buildings separately shown, and the percentages the assessed are of the true values; similar showings are also made for a number of costly and a number of cheap residences. The increase in the true value of some of the commercial and costly residence property is compared with the decrease in the assessment value. Comment is also made on the

constantly increasing value of land and decreasing value of improvements, with almost stationary assessment values.

In comparing values for old and new style office buildings it is found that while in both cases the site value exceeds the value of the buildings, the proportion is much greater in the case of the old buildings. For 44 new buildings the site value was 50.84 per cent of the value of both land and buildings, while for 16 old buildings it was 74.23 per cent. In the case of 8 lots in a choice residence portion of the city the value of the ground is shown to have increased 556.59 per cent between 1882 and 1893, while the assessed valuation increased 76.55 per cent, and the per cent that the assessed is of the true value decreased from 21.72 in 1882 to 5.84 in 1893. The assessed value of the improvements on these lots in 1893 was 15.82 per cent of the true value. For 98 unimproved lots the assessment for 1893 was 4.88 per cent of the true value, while for 20 buildings it was 13.54 per cent. The variation between the percentage of true value at which buildings are assessed and that at which building sites are assessed appears to be about the same for all classes of property.

Apart from its obvious tendency to obstruct improvement, the report states that "a custom of assessment for taxation like that above described must therefore in its very nature discriminate against the owners of improved property according to the greater value of their improvements relatively to the value of their land. And this operates with special force against owners of cheaper properties." Comparing a business property valued at \$800,000 with a residence valued at \$8,875, it is shown that for the business property the ground was 87.50 per cent and the building 12.50 per cent of the total value, and for the residence the ground was 21.13 per cent and the building 78.87 per cent. The assessed value of the land in the case of the business property was 7.29 per cent, the building 27 per cent, and the total 9.75 per cent of the true value. For the residence property the percentages were, land 5.33 per cent, building 15.71 per cent, and total 13.52 per cent of the true value. In these two cases the assessment valuation is, in proportion to actual value, lower on the cheaper property, both as to site and improvement, than on the business property; and yet the total assessment valuation of the cheaper property is 3.77 per cent greater, as compared with the total real value, than the total assessment of the business property. The tendency to a higher relative assessment on cheap residence property is further illustrated in the following statement by comparing the percentages that the average value of the ground and of the buildings, respectively, are of the total value of the ground and buildings in different classes of property:

PERCENTAGE OF VALUE OF GROUND AND OF BUILDINGS OF TOTAL VALUE,
CHICAGO.,

Class of property.	Per cent of average value of—	
	Ground of total value of property.	Buildings of total value of property.
Sixty office buildings in center of business district.....	52. 18	47. 82
Choice residence quarter.....	56. 58	43. 42
Cheap residence quarter.....	26. 06	73. 94
Vacant lots.....	100	.....

If for purposes of taxation sites are assessed at “say 5 per cent and buildings at 15 per cent of real value, it is clear that the owners of cheap residences will pay a great deal higher tax in proportion to the value of their property than any other class.”

Continuing the comparison between the assessment values for different classes of property, the following statement summarizes the totals for a number of tables:

TRUE AND ASSESSED VALUE OF LAND AND OF IMPROVEMENTS IN CHICAGO.

Items.	Class of property.				Total.
	Business and office.	Choice residence.	Cheap residence.	Unimproved.	
Pieces of property.....	70	30	80	98	278
True value, 1893.....	\$100,503,500	\$4,226,000	\$69,357	\$245,975	\$105,044,832
Average value.....	\$1,435,764	\$140,867	\$867	\$2,510	\$377,859
Assessors' valuation, 1893.....	\$9,039,250	\$328,860	\$11,027	\$12,010	\$9,391,147
Per cent of assessors' valuation of true value.....	a 9. 67	7. 78	15. 90	4. 88	a 9. 58

a Not including two pieces of ground and one building which were exempt from taxation.

The centralization of land ownership is shown by a series of tables. The first table gives an alphabetical list of the owners of all the real estate in the business center of Chicago, except property owned by national and local governments, religious and educational institutions, and railroads. The number of pieces and the number of front and square feet owned by each are given, and the assessed valuations of ground and improvements, respectively, are shown for each of the years 1892, 1893, and 1894. In other tables the properties are grouped by classes according to the number of front feet owned. The number and percentage of square feet owned by each class and selected groups of classes are shown, and the assessed valuation of the ground and improvements for each of the years 1892, 1893, and 1894 is also given for each class, together with the per cent that this valuation is of the total assessed valuation. A little over 7 per cent of the owners own ground, the assessed valuation of which is more than 42 per cent of the total assessed valuation of the ground, while by another grouping of classes it appears that over two-thirds of the owners possess less than one-third of the ground, the assessed valuation of which is but a scant

quarter of the total assessed valuation. Of the 1,198 owners 340 were women, who owned 20.49 per cent of the pieces of property and 16.86 per cent of the total square feet.

The holdings of nonresidents in the business section of the city are described and summarized for the year 1894 according to the States in which the owners reside.

The disproportion between the assessed value of unimproved and improved land is shown by a series of tables giving a description, and the assessed values by years, of a number of pieces of property in the business section of Chicago that were vacant in 1892, 1893, and 1894, or that were improved in one or two of these years but vacant in the others. These tables are summarized by years, and some of the principal items shown are as follows:

ASSESSED VALUE OF UNIMPROVED AND IMPROVED PROPERTY IN CHICAGO.

	1892.	1893.	1894.
Unimproved property:			
Pieces.....	128	94	99
Front feet.....	5, 192. 7	3, 495. 2	3, 827. 7
Square feet.....	573, 267. 4	370, 012. 6	449, 353. 6
Assessors' valuation of ground—			
Per front foot.....	\$179. 633	\$146. 349	\$160. 676
Per square foot.....	\$1. 627	\$1. 382	\$1. 368
Total.....	\$932, 780	\$511, 520	\$615, 020
Improved property:			
Pieces.....	27	61	56
Front feet.....	1, 693. 0	3, 480. 5	3, 058. 0
Square feet.....	210, 380. 3	413, 635. 1	334, 294. 1
Assessors' valuation—			
Ground.....	\$412, 100. 00	\$838, 860. 00	\$729, 360. 00
Improvements.....	174, 790. 00	861, 320. 00	929, 550. 00
Total.....	586, 890. 00	1, 700, 180. 00	1, 658, 910. 00
Average valuation—			
Per front foot, ground.....	243. 414	241. 017	238. 509
Per square foot, ground.....	<i>a</i> 1. 954	2. 028	2. 182
Per front foot, ground and improvements.....	<i>b</i> 346. 893	488. 487	542. 482
Per square foot, ground and improvements.....	2. 789	4. 110	4. 962

a Figures here apparently should be \$1.959; those given are, however, according to the original.

b Figures here apparently should be \$346.657; those given are, however, according to the original.

The assessed valuation of certain property in the business district of Chicago is shown by years from 1890 to 1894, inclusive, the figures being given separately for each piece of property, and summarized as follows:

ASSESSED VALUATIONS IN CHICAGO, 1890 TO 1894.

Class of property.	Persons to whom listed.	Pieces of property represented.	Assessors' valuation.				
			1890.	1891.	1892.	1893.	1894.
Ground.....	38	45	\$648, 650	\$707, 600	\$869, 400	\$903, 200	\$857, 450
Improvements.....	143	189	2, 358, 750	2, 518, 000	3, 492, 800	3, 566, 100	2, 736, 860
Total.....	181	234	3, 007, 400	3, 225, 600	4, 362, 200	4, 469, 300	3, 594, 310

Statements similar to the above, for the years 1892, 1893, and 1894, are given for the separate pieces of property owned by forty-two of the largest owners of property in the business district of the city.

A number of tables are presented which show the quantity and assessed value of real and personal property, also of railroad and other corporate property throughout the entire State of Illinois, with appropriate comparisons with similar values for the State of Indiana. These statistics are shown in detail by county totals, comparisons being made between the totals of 1873 and 1893. The two final summary tables are in substance as follows:

ASSESSED VALUATION, ALL CLASSES OF PROPERTY, ILLINOIS.

Class of property.	Assessed values in—		Decrease.	Per cent of decrease.
	1873.	1893.		
Personal property.....	\$287, 292, 809	\$145, 318, 406	\$141, 974, 403	49. 42
Lands	582, 416, 667	320, 964, 855	261, 451, 812	44. 89
Town and city lots.....	317, 199, 235	293, 274, 185	23, 925, 100	7. 54
Railroads (all property).....	133, 807, 823	82, 270, 090	51, 537, 733	38. 52
Corporations other than railroads.....	20, 896, 462	5, 363, 979	15, 532, 483	74. 33
The city of Quincy.....	13, 788, 271	(a)	13, 788, 271	.....
Total	1, 355, 401, 317	847, 191, 515	508, 209, 802	37. 50

a Assessment of the city of Quincy included in Adams County.

ASSESSED VALUATION, ALL CLASSES OF PROPERTY, ILLINOIS AND INDIANA.

Class of property.	Assessed values in—		Excess of Indiana over Illinois.	
	Illinois, 1893.	Indiana, 1894.	Amount.	Per cent.
Real estate.....	\$614, 239, 040	\$843, 381, 600	\$229, 142, 560	37. 31
Personal property	145, 318, 406	291, 085, 845	145, 767, 439	a 103. 09
Railroad property.....	82, 270, 090	157, 743, 026	75, 472, 936	91. 74
Corporations other than railroads.....	5, 363, 979	b 4, 983, 153	c 380, 826	c 7. 64
Total	847, 191, 515	1, 297, 193, 624	450, 002, 109	53. 12

a Figures here apparently should be 100.31; those given are, however, according to the original.
b Includes telegraph, telephone, express and palace car companies only.
c Excess in favor of Illinois.

The population, according to the United States census of 1890, was for Illinois 3,826,351 and for Indiana 2,192,404.

The evils of the existing system of taxation and their remedies are discussed under appropriate heads. The impracticability of taxing personal property, the desirability of exempting improvements from taxation, and the practicability of site-value taxation are treated at length, the results of the statistical tables being used to support the arguments.

In summarizing, it is stated that the statistics show that the tax laws of the State are systematically violated; that Cook County escapes a fair proportion of general taxes as compared with other counties, and Chicago as compared with the remainder of Cook County; that by the assessment of buildings at a higher proportionate valuation than land, buildings in Chicago are taxed much more than land, which forces an undue proportion of taxes upon the poor and people in moderate circumstances; that discriminating undervaluations, indirect taxes, and tenderness toward landed interests in Chicago, besides overburdening

the laboring class with taxes, are diminishing opportunities for employment, dangerously concentrating ownership of land, and generally promoting the interests of the very rich at the expense of the rest of the community. A number of recommendations are made for additional legislation to remedy these evils.

The report on taxation is closed with a series of tables giving in detail every sale of property coming under the investigation of the bureau for each of the years 1890, 1891, and 1892, and for the years 1893 and 1894 considered together, showing the amount of the consideration as expressed in the warranty deeds, and the assessments on the same property for each of the years in which the property was sold; also recapitulations showing the same facts by classes of property, according to value, for each year from 1870 to 1892, inclusive, and for the years 1893 and 1894 considered together.

MAINE.

The Eighth Annual Report of the Bureau of Industrial and Labor Statistics of Maine for the year 1894 treats of the following subjects: Manufacturers' returns of the effects of the business depression, 51 pages; factories, mills, and shops built in 1894, 3 pages; census statistics, 10 pages; retail prices, 36 pages; pulp and paper making, 13 pages; publishing business, 12 pages; part of the proceedings of the tenth annual convention of the National Association of Officials of Bureaus of Labor Statistics, 24 pages; the labor laws of Maine, 10 pages; report of the inspector of factories, workshops, mines, and quarries, 46 pages.

MANUFACTURERS' RETURNS OF THE EFFECTS OF THE BUSINESS DEPRESSION.—These statistics are the result of two investigations, one in July and the other in October, 1894, the reports being collected by correspondence. Two hundred and twenty-four reports were received in answer to the first call, representing nearly all the cotton factories, large woolen mills, and other important manufacturing establishments in the State. While the replies to the second call were not so numerous and complete, they show an improved condition in some industries and but slight changes in others. The returns are presented in detail, and show for each establishment and industry the working time and number of employees when running on full time and during July, 1894; also whether wages have been reduced since April 1, 1893, and the per cent of reduction. The reports for July are followed by those for October, which show the changes that occurred in each establishment between July and October.

While the report does not present a statistical summary of the effects of the industrial depression on all industries, the Commissioner states that "Maine has, undoubtedly, felt the bad effects of the business depression to a much less degree than other sections of the country." It appears

that the total loss in the number of men employed on the railroads of the State during 1894, as compared with 1893, was 412, and in wages, \$181,026.54.

FACTORIES, MILLS, AND SHOPS BUILT IN 1894.—The cost of work in building or enlarging factories, mills, and shops in the State is shown to have decreased from \$3,023,850 in 1891 to \$663,700 in 1894, while the number of men employed on such work was 4,278 in the former and 1,039 in the latter year. This showing is made by counties and towns, the character of the industry being indicated for each establishment.

CENSUS STATISTICS.—These consist of a reproduction of some of the totals of the Eleventh Census of the United States that pertain to the State of Maine.

RETAIL PRICES.—The lowest, highest, and average retail prices in July, 1893, and July, 1894, for the necessities of life are shown for each of the principal cities and towns of the State. The results are summarized so as to show the average price of each article by counties and for the entire State. The average prices for the State in July, 1894, of the articles enumerated are as follows:

AVERAGE RETAIL PRICES IN JULY, 1894.

Article.	Average retail price.	Article.	Average retail price.
Apples, cooking, per peck.....	\$0. 232	Halibut, fresh, per pound	\$0. 154
Apples, dried, per pound.....	. 092	Kerosene, per gallon.....	. 100
Apples, evaporated, per pound.....	. 161	Lamb, per pound.....	. 132
Beans, white, per peck.....	. 667	Lard, per pound.....	. 110
Beans, yellow eyes, per peck.....	. 713	Mackerel, fresh, per pound.....	. 111
Beef, corned, per pound.....	. 069	Mackerel, salt, No. 2, per pound.....	. 099
Beef, steak, per pound.....	. 179	Milk, per quart.....	. 055
Beef, roasts, per pound.....	. 140	Molasses, good, per gallon.....	. 410
Beef, soup, per pound.....	. 042	Mutton, per pound .....	. 095
Butter, best, per pound.....	. 230	Oatmeal, per pound.....	. 049
Cabbage, per pound.....	. 023	Onions, per pound .....	. 042
Cheese, per pound .....	. 147	Pickles, per quart .....	. 110
Coal, stove, per ton.....	6. 400	Pork, clear, per pound.....	. 104
Cod, fresh, per pound.....	. 061	Potatoes, per peck.....	. 228
Cod, dried, per pound.....	. 067	Raisins, cooking, per pound.....	. 086
Coffee, roasted, Rio, per pound .....	. 286	Rice, per pound.....	. 076
Coffee, roasted, Java, per pound.....	. 359	Salt, 20 pounds, box or bag .....	. 207
Corn meal, per pound.....	. 021	Sausage, per pound.....	. 111
Cranberries, per quart.....	. 110	Soap, hard, per pound .....	. 058
Cracked wheat, per pound.....	. 048	Sugar, granulated, per pound.....	. 054
Crackers, per pound.....	. 077	Tea, Oolong, per pound.....	. 462
Eggs, per dozen .....	. 179	Tripe, pickled, per pound.....	. 079
Flour, family, per barrel.....	3. 950	Vinegar, per gallon.....	. 235
Flour, best, per barrel	4. 680	Wood, hard, sawed and split, per cord.....	5. 920
Ham, sliced, per pound .....	. 177	Wood, soft, sawed and spilt, per cord ..	4. 210

PULP AND PAPER MAKING AND THE PUBLISHING BUSINESS.—The presentation concerning these industries consists of a description of their development in the State, and of the special inducements offered to manufacturing enterprises by the natural resources of Maine.

REPORT OF THE INSPECTOR OF FACTORIES, WORKSHOPS, MINES, AND QUARRIES.—This is the annual report made to the commissioner of the bureau, and incorporated in his report, as required by law. Many devices for covering the dangerous parts of machinery or for

placing safeguards around other points of danger are described, the descriptions being, in most cases, accompanied by cuts and figures. The matter of fire escapes receives attention and several illustrations are introduced. Other parts of the report relate to fire extinguishers, sanitary matters, and child labor—the cost of sanitary improvements made during the year and the number of children employed in factories visited by the inspector being given.

MARYLAND.

The Third Annual Report of the Bureau of Industrial Statistics of Maryland for the year 1894 treats of the following subjects: Statistics of manufactures, agriculture, and mortgages, 66 pages; personal property values, 10 pages; sweat shops, 35 pages; the unemployed, 57 pages; strikes, 24 pages.

Personal property values, sweat shops, strikes, and a part of the presentation for the unemployed are the results of original investigations. Statistics of manufactures, agriculture, and mortgages are a reproduction of the totals of the Eleventh Census of the United States for Maryland.

PERSONAL PROPERTY VALUES.—This investigation was designed to throw some light on the distribution of wealth. It deals with the values of personal property only. The inquiry was confined to the examination of 3,498 estates probated in Baltimore City during the period from 1875 to 1880, and 5,914 estates probated from 1888 to 1893. The results show that during the former period 64, or 1.8 per cent, of the estates represented 52 per cent of the total value of all, leaving 3,434 estates to represent 48 per cent of the value. During the latter period 89, or 1.5 per cent, of the estates aggregated 44 per cent, or nearly one-half, of the total value. The number and value of the estates by classified valuations, ranging from \$500 and under to \$100,000 and over, are shown for each year covered by the investigation. The following summary presents the totals for the two periods:

VALUE OF PERSONAL PROPERTY BELONGING TO ESTATES PROBATED IN BALTIMORE CITY DURING TWELVE YEARS.

Estates having personal property valued—	1875 to 1880, inclusive. 1888 to 1893, inclusive.			
	Number.	Value.	Number.	Value.
Under \$500.....	854	\$201, 902	1, 359	\$333, 225
\$500 to \$1,000.....	501	361, 407	958	656, 038
\$1,000 to \$2,500.....	805	1, 287, 083	1, 358	2, 165, 694
\$2,500 to \$5,000.....	433	1, 526, 467	792	2, 776, 823
\$5,000 to \$10,000.....	341	2, 329, 146	578	4, 009, 751
\$10,000 to \$25,000.....	317	4, 981, 125	452	7, 123, 912
\$25,000 to \$50,000.....	127	4, 475, 415	199	6, 996, 063
\$50,000 to \$100,000.....	56	3, 890, 194	129	9, 157, 922
Over \$100,000.....	64	21, 038, 650	89	25, 836 140
Total	3, 498	40, 091, 389	5, 914	59, 055, 568

SWEAT SHOPS.—A detailed description is given of the surrounding conditions, dimensions of rooms, number of hands employed, wages, etc., for about 200 shops in Baltimore City. The law of 1894 regulating the sanitary condition of sweat shops is quoted. In commenting on the results of the inquiry the Commissioner states: "The rate of wages paid to those who are compelled to work under such unhealthy conditions has been greatly reduced within the past twelve months, in many cases amounting to 50 per cent." The actual and average wages are quoted for different classes of employees in the different shops.

THE UNEMPLOYED.—The results of the investigation as to the number of the unemployed in Baltimore City during the period of business depression are given in detail for the principal trades. A careful estimate places the whole number of the unemployed in the city during the winter of 1893-94 at 33,900, or more than one-third of the working people. A part of this report is devoted to a treatise entitled "Government aid," in which the methods prevailing in England and other European countries of rendering assistance to the unemployed are discussed.

STRIKES.—The report states that the coal miners' strike, which occurred in May and June, 1894, lasting twenty-seven working days and involving from 3,500 to 3,700 miners, was the only labor disturbance in the State during the year that involved the complete suspension of any industry. This was the third big strike in Maryland during the past seventeen years. A detailed history is given of this and the other minor labor troubles that have occurred since the publication of the preceding report.

NEW HAMPSHIRE.

The Second Annual Report of the Bureau of Labor of New Hampshire is for the year 1894. The introduction, consisting of 16 pages, recites the objects and presents some of the principal features of the several investigations; also makes a number of recommendations for additional legislation to increase the efficiency of the bureau. The subjects treated are as follows: Labor movement and labor organizations, 96 pages; financial statistics, by towns, cities, and counties, 54 pages; town statistics, 117 pages; wage-earners' statistics, 167 pages; temporary aid to unemployed, 20 pages; strikes and lockouts, 20 pages; statistics of manufactures, 34 pages; industrial chronology, 7 pages.

LABOR MOVEMENT AND LABOR ORGANIZATIONS.—A brief historical sketch is given of labor and of labor organizations from their origin in the guilds of the middle ages; also the present status of such organizations in the United States and in foreign countries. The date of organization, character of industry, membership, and facts concerning the objects of the organization, also in some instances a historical sketch, are shown for each labor organization in the State. There were 58 organizations reported for 1894, with a membership of 3,294, of whom 2,980 were males and 314 females.

FINANCIAL STATISTICS BY TOWNS, CITIES, AND COUNTIES.—These statistics are presented in twenty-four tables, which show for towns, cities, and counties the assessed valuation, taxes committed for collection for the year ending March 31, 1894, receipts, amount paid for salaries of school-teachers and other school expenses, for highways, for pauper aid, and miscellaneous expenses, indebtedness, surplus, and cash in treasury, compiled from the latest obtainable data. The indebtedness, the surplus where there is no indebtedness, and cash in treasury are computed for the year ending February 15, 1894.

TOWN STATISTICS.—The information given under this title consists of a brief statement for each town and city in the State as to its location; principal (nearest, if not in town) railroad stations; line of railroad on which located; banking town; population; number of ratable polls; assessed valuation of land and buildings, mills and machinery, stock in trade, money on hand, at interest or on deposit, stock in banks or corporations in State; valuation of assessed live stock, and various other facts of general interest.

WAGE EARNERS' STATISTICS.—These statistics are the leading feature of the work of the bureau for the year 1894. The data were secured by correspondence, returns being received from 711 individual workmen, representing over thirty branches of industry. The information for the individual reports is grouped by industries, and the totals for each industry are brought forward in summary form. There are numerous facts presented in the individual reports concerning the nativity of the wage-earner, parent nativity, conjugal condition, number in family, number of children attending school, number dependent in family, age at beginning work, time worked in present occupation and for present employer, hours employed per week, days and weeks unemployed, cause of nonemployment, weekly and yearly wages, increase or decrease in wages, times of payment, wages withheld, income other than wages, total yearly income, expenses of single and of married men, living expenses, savings, value of property, number owning homes, number belonging to societies, and amount of dues and of benefits.

Of the 711 workingmen who made reports 84+ per cent were born in America and 15+ per cent in foreign countries. The parents of 72+ per cent of the number were American born, the percentage being the same for both father and mother. The conjugal condition showed 72+ per cent married, 25+ per cent unmarried, and 2+ per cent widowed. Of the married persons 65+ per cent reported children in the family and 34+ percent no children. One hundred and thirty-nine families reported one child each. In the various occupations in which the wage-earners were engaged, 358 have worked from one to ten years each, and 179 from ten to twenty years each. The number of hours worked weekly varied from thirty-six to ninety-eight, according to occupation, clerks working by far the greatest number, they averaging 70+ hours. Of the total number, 64+ per cent were unemployed from three days to nearly the

entire year, the average time unemployed being ten weeks and five days. Of the entire number 672 reported amount of wages received, which varied from \$5 to \$27 per week. More received \$12 per week than any other sum, which is slightly above the average amount received by the entire number reporting. Nearly 30 per cent (211) reported wages decreased, 429 no decrease in wages, and 71 made no report; in only one instance was an increase in wages reported. The yearly earnings and expenses are reported by trades, and 305 wage-earners, or 42+ per cent, reported earnings more than enough to pay living expenses; 283, or 39+ per cent, reported to the contrary, and 123 made no report on the subject. Thirty-three per cent (220) of those reporting upon the subject of home ownership owned homes, 443 did not, and 48 made no report. The tendency to join fraternal organizations for the purpose of obtaining care and relief in the event of sickness and insurance for the family in case of death is well-nigh universal. Four hundred and fifty-five, or 64 per cent, reported as belonging to from one to six societies each.

The opinions of a number of workingmen on hours of work, labor organizations, and other kindred subjects follow immediately the analysis of wage-earners' statistics.

TEMPORARY AID TO UNEMPLOYED.—During the financial depression of 1893-94 there was very little suffering in the State through lack of employment, and in but a very few places were unusual means taken to either provide work for the unemployed or to furnish aid to the unfortunate poor. In order to ascertain to what extent the towns and cities of the State had been called upon to give assistance during the winter of 1893-94, over and above the amount paid the year before, the bureau, by circular letter, requested the selectmen and city clerks to furnish such information.

The estimated number of persons, as reported to the bureau, out of work and unable to obtain employment in the State during the whole or a part of the winter of 1893-94, was 2,580; the number wholly or in part dependent upon charity for support, 1,580; the number receiving temporary aid at public expense, 1,782; and the amount paid for temporary aid over and above the previous year, \$15,997.40. The exhibit closes with the statement: "In view of the wide prevailing distress in all sections of the country this is a remarkable showing, and it is doubtful if the working people in any other State felt the effects of the hard times less keenly, or received less public aid in excess of former years, than the laboring classes of New Hampshire." No attempt was made to procure the amount expended for relief by charitable organizations.

The comments of city clerks and selectmen, given in reply to the question, "What measures (if any) were adopted in your town for securing work or obtaining relief for the unemployed during the winter," are quoted in full.

STRIKES AND LOCKOUTS.—This subject is introduced with a brief historical statement concerning strikes in America. The strikes that have occurred in the State, with the exception of those in the period from 1887 to 1893, to be covered by the report of the United States Department of Labor, are treated in detail, beginning with the first in 1838, which occurred at Dover and was participated in by factory girls who struck against a proposed reduction in wages.

STATISTICS OF MANUFACTURES.—The statistics of manufactures in New Hampshire, as published by the Eleventh Census of the United States, are reproduced. The bureau secured, by correspondence, reports from 299 manufacturing establishments in the State concerning their operations during the year 1893, and covering nearly the entire range of industry. These statistics are presented by industries, and comparisons are made between them and the statistics for the previous year for 166 identical establishments.

The 299 establishments reported as invested capital, \$18,069,648; cost of material, \$11,838,802; wages paid, \$5,777,161; value of product, \$21,151,826; total number of employees, 16,959, of whom 11,507 were males and 5,452 females. Compared with the United States Census of 1890 these totals represent 22+ per cent of the entire capital invested in the manufactures of the State, 24+ per cent of the value of product and material used, 23 per cent of the total wages paid, and 26 per cent of the total employees.

Calculated on a basis of 308 days to the year, the average number of days of work per establishment for the 299 reporting was 269, or 87.33 per cent of full time, and the average proportion of business done was 72 per cent of the full capacity of the establishments.

A comparison of the returns for the 166 establishments reporting in both 1893 and 1894 shows a decrease in capital of 3.20 per cent, in cost of material 4.85 per cent, and in value of product 13.85 per cent. The total number of employees decreased 5.46 per cent, while the total wages decreased 9.87 per cent. The average yearly earnings per individual, without regard to sex or age, decreased from \$341 to \$325. The average number of days establishments were in operation decreased from 273 to 269, while the average proportion of business done decreased from 73.75 to 71.48 per cent.

INDUSTRIAL CHRONOLOGY.—A description is given of the additions and improvements to factories and shops, and a statement made of other matters pertaining to changes in industrial establishments in the different towns and cities of the State.

OHIO.

The Eighteenth Annual Report of the Bureau of Labor Statistics of the State of Ohio for the year 1894 treats of the following subjects: Ohio marine interests, 47 pages; "sweating" in Cincinnati, 12 pages; tenement houses in Cincinnati, 29 pages; child labor in Cincinnati, 7

pages; convict labor, special report, 5 pages; mining, 19 pages; manufacturing, 238 pages; employment offices, 7 pages.

OHIO MARINE INTERESTS.—The object of the report on this subject, as stated in the introduction, is “to give those whose interests lie in other lines an insight into the achievements and characteristics of the Ohio seaman, rather than to compile a document that would meet the technical criticism of the seaman himself.”

The merchant marine of the Great Lakes, exclusive of barges and canal boats other than steam, and of small pleasure craft, was on January 1, 1894, placed at 3,056 vessels, having an aggregate tonnage of 1,160,371 tons. Of this fleet there were owned at or controlled from Ohio ports 475 vessels, with an aggregate capacity of 344,138 tons.

The statistics presented show the number of the different kinds of vessels for each city or town of the State in which they are owned or managed. In 1890 the combined receipts and shipments of all lake ports of any importance reached a total of 63,979,589 tons. Ohio's share of this traffic was 12,016,898 tons, or 18 per cent. The receipts and shipments of different commodities are shown for the principal lake cities of the State, and the statistics of commerce through Saint Mary Falls Canal, Michigan, for the seasons of 1892 and 1893 are shown in detail.

During the year 1893 there were 10 vessels of different classes built in the yards of the State that had an aggregate capacity of 8,021 tons.

The fishing industry of Ohio is described and a statistical statement given which shows the average daily and yearly earnings, and number of days worked during the year, for the different classes of employees engaged in the industry. Reports from about seven-eighths of the Ohio fisheries show the capital invested to be \$549,000, with 80 boats, and giving employment to 587 men.

Freight rates on Lake Superior traffic, in which Ohio tonnage is largely engaged, are given for different commodities for each year from 1887 to 1893. The average rate for all classes of freight passing in and out of Lake Superior in 1893 was 1.1 mills per ton mile.

The passenger traffic of the Great Lakes is touched upon. A description is also given of the ports of Ohio, which is followed by a statement of the interest taken in and protection afforded to the marine interests of the State by the United States Government. A short historical sketch is given of the Lake Erie sailor and an account of his present status, including his earnings. Statistical tables of wages, hours of work, and days employed during the year are shown for different classes of employees on shipboard and for dockmen. The methods of loading and unloading vessels and docks are treated and the present condition and future of Ohio's marine interests are discussed.

“SWEATING” IN CINCINNATI.—The information on this subject is the result of a personal investigation by the agents of the bureau. Of the places of manufacture visited, a comparatively small number were

found to be in tenement houses, while a much larger proportion were in shops contained in dwelling houses, but separate from the living rooms and usually affording fair sanitary conditions. But unfortunately shops of the latter class, although still numbering nearly one-half of the total number in Cincinnati, are fast passing away, owing to the competition of Russian Jews and Italians in the city tenements, and in still larger degree of suburban and country workers. These home workers receive their work from the hands of the large manufacturers and not from smaller shops contracting with manufacturers, thus strikingly differentiating the system in Cincinnati from that of most other large cities. The home manufacture of ready-made clothing in Cincinnati has passed largely out of the province of the regular trade, and has come almost entirely into the hands of those who look upon the work as a means of gaining "pin money." Some of the results shown in the tables presented are as follows:

SWEAT SHOPS IN CINCINNATI.

Garments made.	Places visited.	Shops in—			Average—					
		Tene- ment living rooms.	Homes, but apart from living rooms.	Build- ings sepa- rate from homes.	Price per piece.	Reduc- tion in price during year (per cent).	Weekly earn- ings of sweat- er's family.	Per- sons in sweat- er's family.	Rooms occu- pied.	Monthly rent.
Cloaks.....	16	10	3	3	\$0.57 ¹ / ₄	46.25	\$9.39	6.00	2.70	\$9.40
Coats.....	93	20	57	16	.51	32.23	11.93	5.00	3.87	a 15.42
Overcoats (b).....	18	.....	.....	.....	.94	31.00	.....	.....	.....	.....
Vests.....	46	20	23	3	.21 ¹ / ₃	20.58	11.22	3.32	2.59	12.62
Pants.....	32	13	13	6	.23 ¹ / ₃	31.00	8.17	4.52	3.05	11.42
Pants (finishers) (c).....	12	4	1	.....	.05 ¹ / ₂	12.00	7.67	2.73	2.00	5.50
Boys' suits.....	4	4	.....	.....	.37	20.00	10.00	2.00	2.25	7.16
Buttonholes.....	4	.....	2	2	d .62 ³ / ₄	42.00	9.25	4.25	2.20	12.37
Custom coats.....	9	5	3	1	4.66	32.00	16.33	3.29	2.43	10.13

a In 27 instances the rent from which this average is made includes rent of shop, and this is generally equal to or greater than rent of living rooms, which varies from \$10 to \$27 a month.
b Overcoats are made in same shops as other coats, and the 18 places averaged are included in the 93 coat shops visited. They are given separately only to show difference in price.
c Only 5 places in which pants finishers were found were engaged exclusively in finishing; the remaining 7 are included in the returns of pants-making shops and represent those in which the work was so subdivided.
d Price per 100.

TENEMENT HOUSES IN CINCINNATI.—This investigation was limited to that part of the tenement-house population engaged in the trades or in factories or at common day labor, the canvass being confined to one representative ward of the city. The statistics gathered by the agents of the bureau are shown in detail for each return and cover the social and sanitary conditions and earnings of those reporting. Of the total number of fathers of families reported 165, or 22 per cent, and of mothers, 206, or 29 per cent, were Americans; 498, or 65 per cent, of the fathers and 442, or 61 per cent, of the mothers, native Germans; the remaining 96, or 13 per cent, of the fathers and 75, or 10 per cent, of the mothers being natives of other foreign countries. The 948 families reported occupied 2,160 rooms; the average monthly

rent for a tenement was \$6.94 ; and 56 families owned their own homes. There were 50 male and 32 female lodgers and 1,453 children reported.

CHILD LABOR IN CINCINNATI.—These statistics are the result of a personal canvass of 40 establishments, embracing 15 industries and employing 7,699 persons, of whom 946 were children under 16 years of age, 482 being males and 464 females. Three hundred and eighteen of these children began work before they were 14 years of age. The number of children working with machinery was 135, and the number of adults displaced by child labor during the year was reported as 42. Of the 946 children only 29 were orphans ; 204 reported fathers deceased, and 39 invalid fathers. From this investigation it appears that child labor in Cincinnati is more of a custom than a necessity.

The statistics are presented in two tables. The first table shows for each of the 15 industries the number of establishments, total number employed, number of males and females, respectively, under 16 years of age, hours employed and earnings per week, number working with machinery, number of adults displaced, and number learning a trade. The second table contains figures that tend to show the ability of the parents to support their families independent of the earnings of the children.

CONVICT LABOR—SPECIAL REPORT.—The bureau having received complaints that the provisions of the law to regulate the employment of the inmates of the penitentiaries, reformatories, and workhouses in the State of Ohio, enacted April 16, 1892, and amended April 24, 1893, were being violated, an investigation was instituted to determine to what extent the industries in the penitentiaries and workhouses affected industries of the same kind employing free labor. According to the provisions of the law the number of persons employed in the penitentiaries and workhouses should not exceed 10 per cent of the number of persons manufacturing the same kind of goods in the State outside of the penitentiaries and workhouses. January 1, 1894, was fixed as the date of investigation. The statistics show for the different industries conducted in the penitentiaries and workhouses, that are affected by the law, the number of convicts employed ; number of persons employed ; free labor ; the number (10 per cent) of convicts allowed by law ; the number actually employed in excess of the 10 per cent allowed by law ; also the number that could be lawfully employed.

MINING.—The period covered by the statistics presented on this subject is from January 1 to December 31, 1893. The results are placed in comparison with similar data for the year 1892. No analysis is made of the figures as it is believed the tables are sufficiently explicit. These tables give, by county totals, numerous facts concerning the character of the mines, methods of work, output, cost of mining, number and wages of different classes of employees, and days worked for the year. The figures are preceded by a synopsis of the record of the coal miners' strike of 1894.

MANUFACTURING.—The presentation under this title consists entirely of statistical tables, which cover numerous occupations and all branches of manufacturing industry in the State. The industries and occupations are grouped by specified cities, cities not specified, and villages, the totals in some instances being summarized for the entire State.

The first group of tables shows for males and females, respectively, the number employed, number of days worked during the years 1892 and 1893, hours of daily labor, average daily wages, yearly earnings for 1893, and per cent of increase or decrease in wages for the year ending December 31, 1893. The second and third groups of tables show, for 1892 and 1893, the number of establishments reported, and the number of males and females, respectively, employed during each month of the year for the different industries. The fourth group of tables shows the number of establishments reported, total amount paid in wages during 1892 and 1893, number and monthly salaries of the different classes of office help, and total capital invested. The fifth group of tables shows the number of establishments reported, value of goods made and materials used, respectively, from January 1, 1893, to January 1, 1894; value of manufactured articles and materials, respectively, on hand January 1, 1893, and January 1, 1894, and the amount of capital invested.

The statistics form a complete exposition of the manufacturing industries of the State, especially of wages in all classes of occupations in the different industries and localities.

EMPLOYMENT OFFICES.—The introductory paragraph to this subject opens with the statement: "In 1894 the five free public employment offices of the State found work for nearly 10,000 people. Although this is a falling off of 3,000, compared with 1893, the showing is a very satisfactory one when it is remembered that the dullness in all lines of industry has been more widespread this year than last." The statistical tables show by weeks, for each office, the number of situations wanted and positions secured for males and females, respectively. The totals for the five offices of the State during 1894 are as follows:

POSITIONS SECURED THROUGH EMPLOYMENT OFFICES, 1894.

City.	Help wanted.		Situations wanted.		Positions secured.	
	Males.	Females.	Males.	Females.	Males.	Females.
Cincinnati	297	1,387	2,778	3,162	267	1,144
Cleveland	283	2,065	2,942	3,517	273	1,846
Columbus	605	1,852	2,672	2,226	456	1,343
Toledo	441	1,693	2,472	1,950	367	1,359
Dayton	800	2,447	3,657	3,761	777	1,934
Total	2,426	9,444	14,521	14,616	2,140	7,626

TRADE UNIONS IN GREAT BRITAIN AND IRELAND.

The Seventh Annual Report of the Labor Department of the British Board of Trade, on the subject of trade unions, covering 284 pages, gives valuable and exhaustive information relative to that class of organizations in Great Britain and Ireland for the year 1893. The nature and extent of the information supplied by this report are described as follows:

The trade unions of the kingdom may, broadly speaking, be regarded in two aspects. They are, in the first place, organizations having for chief object the protection of the industrial interests of their members, and, in the second place, many of them are provident societies, arranging for the support of their members in cases of sickness, old age, or other contingencies incidental to the life of workmen. Under whichever aspect they are viewed, they form a most important feature in the social life of the kingdom, and it is, therefore, eminently desirable that record should be made of both classes of their operations. In the present report, therefore, information is given with regard to all the chief points of interest in connection with both the trade and provident working of these unions.

The report deals alike with registered and nonregistered unions, but distinguishes the one from the other, and detailed information concerning them is given in the appendices, of which there are five, occupying 277 of the 284 pages of the report.

The first appendix, covering 109 pages, consists of a table showing, in detail, the number and names of trade unions, the number of branches of such unions, the number and percentage of members receiving certain benefits provided by each union during 1893, the amount of funds on hand at the end of 1892, the amount and analysis of annual income and expenditure, and the amount of funds on hand at the end of 1893. The information is given for each union separately, and the unions are classified according to industries.

The second appendix, covering 110 pages, contains three tables, the first of which shows the number of members belonging to the same unions dealt with in Appendix I at the end of each of the different years from 1870 to 1893, inclusive; the second table shows the contributions, per member, of the same unions during each of the years covered by the first table; the third table shows the amount paid, per member, of certain specified trade unions for unemployed, sick, and superannuation benefits in various years prior to and including 1893.

The third appendix consists of a directory giving the names and addresses of the secretaries of the unions, concerning which data are given in the preceding appendices, and the fourth appendix gives sta-

tistics in relation to disablement and mortality among members of trade unions.

In order that the position of the unions may, to some extent, be presented from their own point of view, extracts have been made from the general addresses of the chief officers of some of the principal unions to their members, through their annual or periodical reports, relative to their operations and progress, financial and otherwise. These extracts constitute the fifth appendix, which closes the report.

For the purposes of this report returns were obtained from 687 trade unions. Of these, 513 were registered under the trade union act, and 174 were not so registered—an increase of 31 registered and 57 unregistered societies as compared with the number reporting in 1892. Ninety-seven of the unions concerning which information is published had local sections or branches to the number of 6,879, at the end of 1893.

In addition to the unions from which returns were secured, the Labor Department had knowledge of the existence of 118 other unregistered unions at the end of 1893, concerning which no information was obtainable beyond the fact that their total membership amounted to 90,660; there were also 41 other such unions of which information concerning the membership could not be secured.

The following summary shows the total number of members, amount of annual income and expenditure, and balance of funds of all unions for which accounts for 1893 were obtained:

Number of unions for which accounts were received	687
Number of members of 677 unions at the end of 1893	1, 270, 789
Total funds of 662 unions in hand at beginning of 1893.....	\$9, 258, 015
Total income of 687 unions for the year.....	9, 718, 259
Total expenditures of 687 unions for the year.....	10, 932, 665
Total funds of 683 unions at end of 1893.....	8, 044, 655

The discrepancy of \$1,046 in the above summary is explained by the statement that two unions, which did not report the amount of their funds at the beginning and end of the year, had an excess of expenditures over income to that amount.

Detailed particulars as to the chief items of expenditure were furnished by 682 unions, and are shown in the following statement:

EXPENDITURES, ETC., OF 682 TRADE UNIONS, 1893.

Items.	Amounts.	Unions.	Members.
Out-of-work benefits.....	\$2, 496, 169	378	827, 840
Dispute benefit.....	3, 567, 364	331	1, 083, 904
Sick benefit.....	1, 161, 823	228	622, 908
Accident benefit.....	126, 889	99	414, 989
Superannuation benefit.....	571, 030	89	458, 678
Funeral benefit.....	458, 385	387	983, 834
Other benefits, grants, etc.....	555, 570	391	842, 202
Grants to other trade unions.....	299, 927	405	996, 618
Working and other expenses.....	1, 690, 919	679	1, 269, 070
Total.....	10, 928, 076	.....	.....

The discrepancy between the total number of unions making the different expenditures, as shown in the preceding statement, and the

total number reporting in reference thereto is explained by the fact that only a limited number of the unions make payments for all the purposes set forth; and there may have been some unions liable to make certain of the payments which may not have been called on to make such payments during the year.

For the purpose of comparing 1893 with 1892, as regards membership and financial operations of trade unions, the returns of 534 trade unions which supplied details for the two years are available, and the figures are presented in the following table:

MEMBERSHIP AND FINANCIAL OPERATIONS OF 534 TRADE UNIONS, 1892 AND 1893.

Items.	1892.	1893.	Increase (+) or decrease (-).
Total membership at end of year.....	1, 195, 932	1, 166, 922	— 29, 010
Total annual income	\$8, 511, 990	\$9, 233, 210	+ \$721, 220
Total annual expenditure	8, 375, 164	10, 497, 819	+2, 122, 655
Total funds at end of year	8, 859, 142	7, 573, 067	—1, 286, 075

^a The figures given here do not quite balance. There is a discrepancy of \$21,466, which is due to the fact that 24 unions showed \$40,567 less funds at the beginning of 1893 than they reported at the end of the previous year, while 44 unions showed \$19,101 more.

In regard to the falling off in membership shown in the preceding table, it is said:

Many of the societies represented have, of course, largely increased their number of members during the year, but the above figures show the net change in the total membership of all the unions. The classes of trade unions most affected by this diminution in aggregate numbers are those which represent the less skilled branches of industry. Indeed, those which suffered most heavily from this falling away of numbers were the unions of unskilled labor. Fourteen unions of men engaged in transport and other branches of such labor show a decrease of 37,000 on the year. In the mining and quarrying group of trades, eight of the unions show a loss of 8,000 members.

Notwithstanding the loss in membership there was a substantial increase, amounting to \$721,220, in the total income of these unions. This is explained by the fact that in the class of unions to which the loss of members is chiefly due the contributions of members are the lowest, while in the organizations of skilled labor, in which the contributions are highest, there has been an increase of membership. It is also to be noted that in many unions when the funds begin to fall below a certain limit the contributions of the members are proportionately increased, so that in bad years their total incomes are greater than in good years. It is also to be remembered that owing to the long duration of extensive labor disputes in 1893, and the large numbers of men engaged in them, great sums of money were contributed in special ways to certain unions for their support, which further increased the gross income for the year.

The increase of expenditures in 1893 over 1892 was chiefly due to the increase of want of employment and of trade disputes. The effect of the industrial depression in both 1892 and 1893 is shown by comparing the expenditures in 1893 with those of 1891. In 1891 the total

expenditure per member of the unions reporting was \$5.38, while in 1893 it had risen to \$8.97. The funds on hand at the end of the year 1893 amounted to \$6.47 per member.

The powers of trade unions as to the investment or deposit of their funds vary considerably, some having almost unlimited discretion, while others are strictly confined to investments of an absolutely safe character. The bulk of these accumulated funds is deposited in Government savings banks, or invested in Government stock, but some of the funds are invested in joint stock companies, municipal stock, or real estate. A sufficient amount, available for immediate use, is kept in the hands of the union officials.

The details of expenditures for different purposes by the 534 trade unions reporting the facts for 1892 and 1893 are shown in the following table, in which are also shown the number and membership of the unions making expenditures for each purpose in each year:

EXPENDITURES, ETC., OF 534 TRADE UNIONS, 1892 AND 1893.

Items.	1892.			1893.			Increase(+) or decrease (—) in expenditures.
	Unions.	Members.	Expenditures.	Unions.	Members.	Expenditures.	
Out-of-work benefits ...	271	728,030	\$1,872,576	300	754,683	\$2,409,141	+ \$536,565
Dispute benefit	280	1,070,788	2,178,898	271	1,010,649	3,426,727	+ 1,247,829
Sick benefit	180	579,608	1,043,655	190	604,920	1,147,511	+ 103,856
Accident benefit	80	348,395	86,716	76	382,216	124,962	+ 38,246
Superannuation benefit.	72	428,914	515,727	80	454,398	567,507	+ 51,780
Funeral benefit	300	887,326	403,574	312	908,496	440,958	+ 37,384
Other benefits, grants, etc	387	1,081,338	633,550	430	1,053,666	798,870	+ 165,320
Working and other expenses	527	1,190,928	1,626,009	530	1,166,444	1,578,376	— 47,633
Total			\$8,360,705			\$10,494,052	

^a The difference between this total of expenditure and that given in the preceding summary is due to some of the unions not reporting the details of their expenditures.

The above table deals with the returns of 534 unions which furnished information as to certain details of their expenditures in either 1892 or 1893. As the same number of unions did not, in any instance, make expenditures for the same purpose in both years the table contains an element of uncertainty. In order to secure a proper basis of comparison the subjoined table is given, which shows for each of the items of expenditure the facts for only such unions or societies as made an expenditure for that purpose in both 1892 and 1893.

EXPENDITURES, ETC., OF TRADE UNIONS REPORTING FOR BOTH 1892 AND 1893.

Items.	Unions.	Members.		Expenditures.		Increase.
		1892.	1893.	1892.	1893.	
Out-of-work benefits....	249	700,880	706,380	\$1,815,380	\$2,359,484	\$544,104
Dispute benefit.....	213	1,007,017	972,446	2,059,381	3,268,487	1,209,106
Sick benefit.....	167	551,333	557,677	1,033,148	1,138,527	105,379
Accident benefit.....	63	327,687	331,521	80,852	120,908	40,056
Superannuation benefit.....	68	425,600	439,307	514,968	564,027	49,059
Funeral benefit.....	268	880,885	875,297	400,946	429,746	28,800
Other benefits, grants, etc.....	351	995,126	987,588	620,581	768,951	148,370
Total				6,525,256	8,650,130	2,124,874

WAGES AND HOURS OF LABOR IN GREAT BRITAIN AND IRELAND.

The following is a synopsis of the principal features of a report on this subject published by the Labor Department of the British Board of Trade. The report consists of three parts, which treat, respectively, of—changes in rates of wages and hours of labor reported as having occurred during 1893, also some preliminary figures on the same subject for 1894; standard piece rates; standard time rates.

CHANGES IN RATES OF WAGES AND HOURS OF LABOR.—The object of the report is to put on record the principal changes which have been reported in market rates of wages and recognized hours of labor in various districts in the chief industries of the United Kingdom during the year to which the report refers.

The data were obtained principally from the tables of changes in wages and hours of labor published monthly in the Labor Gazette. The material was originally secured from newspaper extracts (which were in all cases verified); reports from local correspondents, secretaries of employers' and workmen's associations, and others, on special forms distributed for that purpose; superintendents of mercantile marine, and miscellaneous sources. The information thus secured was subjected to a careful revision prior to publication in the Gazette. The data obtained from the Labor Gazette were supplemented as follows: Information concerning changes not reported at the time they occurred was obtained from the annual reports of trade unions, especially those which publish standard rates of wages. The changes reported during the year were grouped by industries, and printed slips containing the changes reported in each industry were distributed for corrections and additions to the secretaries of the trade unions and of the various employers' associations concerned with those trades, and also to the local correspondents of the department. In certain trades in which no changes had been reported during the year special inquiries were sent to the secretaries of associations. The information concerning the police was supplied by the chief constables and that relating to employees of local authorities by the clerks of such local authorities.

The information concerning changes in seamen's wages is based on returns made by superintendents of mercantile marine to the registrar general of shipping and seamen, and that for agricultural laborers is confined to a comparison for certain districts of the limits of the rates at which laborers of various classes were hired at the yearly and half-yearly hiring fairs in 1892 and 1893.

The field of employment covered more or less by the inquiry included the great majority of the wage-earning population, excepting domestic

servants. Agriculture, however, and railway service were very imperfectly covered, and though all the changes in predominant rates for seamen at the principal ports have been recorded, the peculiar conditions of that industry make it impossible to compute the number affected by changes in rates of wages.

If the industries above mentioned be excluded, the groups of industries in which actual changes have been reported cover a total of nearly 7,000,000 persons of all classes and include all the important fluctuating trades.

For the purpose of this report a change in the rate of wages is defined as a change in the weekly or hourly rate of remuneration of a certain class of work people, apart from any change in the nature of the work performed.

The following classes of changes, which are apt to be confused with changes in the rates of wages, are excluded from the report:

1. Changes in the average earnings in a trade which are due, not to an alteration in the scales of pay for particular classes of work, but to alterations in the proportions which the higher and lower paid classes of work people bear to each other.

2. Changes in the rates of pay for individuals due to promotions, or progressive "increments" of wages. In some classes of undertakings (for example, the police force) the rates of pay of various classes of employees are regulated by scales. The rates of pay, therefore, of individuals may be continually altering. Such internal changes, however, are not to be regarded as real changes in the rates of wages so long as the limits of the scales for each class of employees remain unaltered for work of the same kind.

3. Purely "seasonal" changes in weekly wages which regularly occur at certain periods of the year in certain trades. This change as a rule is accompanied by a change of hours of labor for the summer and winter months, respectively, and merely represents the effect on weekly wages of this change of hours, the hourly rate of pay remaining the same.

4. Changes in the terms of employment which merely provide for extra compensation for extra work.

Exclusive of changes affecting seamen and agricultural laborers, there were 836 cases of changes of wages reported for 1893, and in 706 cases full particulars were obtained. Of the total number of changes 587 were increases and 249 decreases. There were 549,977 individuals affected directly by the 706 changes for which full particulars were secured, but of this number 151,140 finished the year with their wages at the same level as at the beginning, and for the purpose of comparing wages at the end of 1892 and 1893 may be regarded as having their wages unchanged. Of the remaining 398,837 employees, 142,364, or 26 per cent of the whole number affected, gained a net increase of wages, and 256,473, or 47 per cent of the whole number, sustained a net loss. Judged, therefore, by the standard of the number of per-

sons affected, the decreases of wages during the year preponderated over the increases. Nevertheless the net result of all the changes during the year was a slight rise of wages, the average amount of the increases per head being so much greater than that of the decreases as to overbalance the superiority of numbers.

In presenting the statistics the various subdivisions of industry are arranged in seven general groups, the totals being given for each group and each subdivision. The details for each change in wages and hours of labor are also given, the reports being arranged by localities and industries. In the following summaries only the totals for the general groups are presented and those cases considered for which full particulars were secured.

In many cases the same individual was involved in more than one change during the year, and to obtain the aggregate number of employees affected should be counted more than once. The two statements immediately following show the number of changes (increases or decreases in weekly wages) during the year, the number of individual employees affected, and the total and average increase or decrease:

NUMBER OF INCREASES OR DECREASES IN WEEKLY WAGES, AND EMPLOYEES AFFECTED, 1893.

Industries.	Changes.			Employees affected.			
	In-creases.	De-creases.	Total.	Wages in-creased.	Wages de-creased.	Wages same at end as at begin-ning of year.	Total.
Building	265	22	287	40,017	4,521	.....	44,538
Metal, engineering, and shipbuilding ..	35	111	146	5,377	95,279	<i>a</i> 20,600	121,256
Mining and quarrying	40	40	80	75,834	103,802	<i>a</i> 130,290	309,926
Textiles	28	4	32	4,196	50,891	.....	55,087
Clothing	18	.....	18	3,599	.....	.....	3,599
Other trades and occupations	43	18	61	3,210	1,944	<i>a</i> 250	5,404
Employees of public authorities	79	3	82	10,131	36	.....	10,167
Total	508	198	706	142,364	256,473	<i>a</i> 151,140	549,977

a These employees are included in obtaining the average net increase or decrease.

AMOUNT OF INCREASE OR DECREASE IN WEEKLY WAGES, 1893.

Industries.	Increase.				Decrease.			
	Total.	Aver- age per em- ployee.	Net.		Total.	Aver- age per em- ployee.	Net.	
			Total.	Aver- age per em- ployee.			Total.	Aver- age per em- ployee.
Building	\$20,200.35½	\$0.50½	\$18,925.82	\$0.42½	\$1,274.53½	\$0.28	.....	.....
Metal, engineering, and shipbuilding	1,992.83½	.37	.....	.....	28,593.85	.30	\$26,601.01½	\$0.22
Mining and quarrying	86,388.89	1.14	70,546.24½	.23	15,842.64½	.15½	.....	.....
Textiles	848.96	.20	.....	.....	5,540.51	.11	4,691.55	.08½
Clothing	1,388.65½	.38½	1,388.65½	.38½	.....	.....	.....	.....
Other trades and occupa- tions	1,251.42	.39	.....	.....	1,367.00	.70½	115.58	.02
Employees of public au- thorities	3,885.90	.38½	3,871.05½	.38	14.84½	.41	.....	.....
Total	115,957.01½	.81½	63,323.63	.11½	52,633.38½	.20½	.....	.....

The computed net effect upon wages of the total changes of the year, so far as reported in detail, was a rise of \$63,323.63 a week. By this statement is meant that the total wages bill of the country, in industries covered by the returns, for a full week's work at the end of 1893 would exceed that for the corresponding week at the end of 1892 by \$63,323.63. For the purposes of the calculation internal changes during the year are disregarded, and the state of the weekly wages bill is compared at the end of each year. In other words, the comparison deals with the rates of payment at two given points of time; not with the total payments over two given periods of time.

The average weekly rise of wages per head calculated on the total number of persons receiving a rise was 81½ cents, while the average weekly fall per head calculated in a similar way was only 20½ cents. The average net weekly change per head calculated on the total number of persons affected by changes of wages during the year was a rise of 11½ cents. If the net gain be spread over the total estimated number of persons engaged in the trades to which the returns relate, the rise is 47½ cents per head per annum. The number of employees affected by changes in wages formed about 8 per cent of the total number of persons employed in the industries covered.

The sum of the increases, \$115,957.01½, shown in the above statement is itself the balance of much larger amounts of increases and decreases affecting the same individuals, and the same is true of the sum of the decreases, as all internal changes during the year were excluded. The amount of the total weekly increases recorded was \$292,854.78, and of the total decreases \$229,531.15, the difference between which is of course the same as that between the increases and decreases shown in the above table.

The total number of employees (not necessarily separate individuals) affected by the 706 changes for which full particulars were reported, and the total and average of the aggregate increases and decreases per week, are shown in the two following statements:

EMPLOYEES AFFECTED BY CHANGES IN WEEKLY WAGES, 1893.

[A single employee may be affected by more than one change, and hence counted two or more times in this table.]

Industries.	In-creases.	De-creases.	Total.	Average number to each change.		
				In-creases.	De-creases.	Total.
Building.....	40, 217	5, 071	45, 288	152	231	158
Metal, engineering, and shipbuilding.....	30, 827	159, 458	190, 285	881	1, 437	1 303
Mining and quarrying	562, 524	549, 844	1, 112, 368	14, 063	13, 746	13, 905
Textiles	4, 246	50, 891	55, 137	152	12, 723	1, 723
Clothing	3, 599	.....	3, 599	200	.....	200
Other trades and occupations.....	3, 460	2, 194	5, 654	80	122	93
Employees of public authorities	10, 141	36	10, 177	128	12	124
Total	655, 014	767, 494	1, 422, 508	1, 289	3, 876	2, 015

INCREASE OR DECREASE IN AGGREGATE WEEKLY WAGES, 1893.

[A single employee may be affected by more than one change, and hence counted two or more times in this table.]

Industries.	Increase.	Decrease.	Total change.	Average per employee.		
				Increase.	Decrease.	Total change
Building.....	\$20, 200. 35½	\$1, 274. 53½	\$21, 474. 89	\$0. 50	\$0. 25	\$0. 47½
Metal, engineering, and shipbuilding.....	5, 460. 70	32, 061. 72	37, 522. 42	. 17½	. 20	. 19½
Mining and quarrying.....	259, 697. 12½	189, 150. 88	448, 848. 00½	. 46	. 34½	. 40½
Textiles	848. 96	5, 540. 51	6, 389. 47	. 20	. 11	. 11½
Clothing.....	1, 388 65½	-----	1, 388. 65½	. 38½	-----	. 38½
Other trades and occupations.....	1, 373. 08½	1, 488. 66	2, 861. 74½	. 39½	. 68	. 50½
Employees of public authorities.....	3, 885. 90	14. 84½	3, 900. 74½	. 38½	. 41	. 38½
Total	292, 854. 78	229, 531. 15	522, 385. 93	. 44½	. 30	. 36½

There were 164 changes in hours of labor reported as having occurred during 1893, of which one-half (82) occurred in the building trades. Full particulars were secured concerning 155 of these changes, of which 139 were decreases and 16 increases. The total number of employees affected by the 155 changes was 34,649, of whom 1,530 had an increase, and 33,119 a decrease in their hours of labor. The following statements show the number and the extent of changes in the hours of labor for which full particulars were reported, also the number of employees affected for the different groups of industry:

NUMBER OF CHANGES IN HOURS OF LABOR PER WEEK AND EMPLOYEES AFFECTED, 1893.

Industries.	Changes.			Employees affected.		
	Increases.	Decreases.	Total.	Increases.	Decreases.	Total.
Building.....	11	63	74	1, 283	11, 982	13, 265
Metal, engineering, and shipbuilding.....	1	9	10	200	4, 092	4, 292
Mining and quarrying.....	-----	1	1	-----	250	250
Textiles	-----	6	6	-----	2, 021	2, 021
Clothing.....	-----	7	7	-----	7, 840	7, 840
Other trades and occupations.....	-----	30	30	-----	5, 288	5, 288
Employees of public authorities.....	4	23	27	47	1, 646	1, 693
Total	16	139	155	1, 530	33, 119	34, 649

EMPLOYEES AFFECTED BY CHANGES IN AVERAGE HOURS OF LABOR PER WEEK, 1893.

Industries.	Hours per week.								
	Increase.			Decrease.					
	Un-der 1.	1 and un-der 2.	2 and un-der 4.	Under 1.	1 and un-der 2.	2 and un-der 4.	4 and un-der 6.	6 and un-der 8.	8 and over.
Building.....	480	803	-----	5, 365	2, 604	3, 944	69	-----	-----
Metal, engineering, and shipbuilding.....	-----	-----	200	100	1, 690	1, 400	705	197	-----
Mining and quarrying.....	-----	-----	-----	-----	250	-----	-----	-----	-----
Textiles.....	-----	-----	-----	-----	1, 000	1, 021	-----	-----	-----
Clothing.....	-----	-----	-----	-----	200	7, 580	-----	60	-----
Other trades and occupations.....	-----	-----	-----	-----	3, 784	667	564	100	173
Employees of public authorities.....	-----	-----	47	73	272	446	153	654	48
Total.....	480	803	247	5, 538	9, 800	15, 058	1, 491	1, 011	221

The net effect of the changes in each industry as well as that of the whole of the changes reported was a reduction of hours of labor. Attention is called to the fact that in the mining industry, which was more disturbed by wage changes than any other group of industries, and in which proposals had been made for some time past to obtain a reduction of hours by legislative means, not a single change in weekly hours of labor was reported. The one change shown for the group occurred in the quarries.

In order to compute the average effect of the changes, they have been grouped according to the average amount of the increase or decrease per week taken over the whole year. In the case of the building trades, in which the summer and winter weekly hours differ considerably, many of the changes reported affect only summer hours, or only winter hours, or do not affect summer and winter hours to the same extent. In all cases, therefore, the average effect of the change spread over the entire year has been computed for the purpose of the present calculation, due regard being paid to the number of weeks in the year in which the summer and winter rates prevail, respectively.

The net effect of the whole of the changes of hours reported was equivalent to an average reduction of two hours per week for the whole number of persons affected by the changes. The following statement classifies the total number of employees affected by changes of hours, according to the magnitude of the increase or decrease:

EMPLOYEES AFFECTED, CLASSIFIED BY EXTENT OF CHANGE IN HOURS OF LABOR.

Change in hours per week.	Employees affected.		
	Increase.	Decrease.	Total.
Under 2 hours.....	1, 283	15, 338	16, 621
2 and under 4.....	247	15, 058	15, 305
4 and under 6.....		1, 491	1, 491
6 and under 8.....		1, 011	1, 011
8 and over.....		221	221
Total.....	1, 530	33, 119	34, 649

The effect of these changes on the average weekly hours of labor of the entire body of persons engaged in the groups of industries included in the returns was, of course, inappreciable.

The average number of persons affected by a change of hours was 224. In the building trades it was 179, in the printing and paper trades (which are included in the class of other trades and occupations) 350, in the textiles 337, in the clothing 1,120.

The preliminary figures given for 1894 are considered as too incomplete to be used for comparison with 1893, and should only be accepted as indicating the general tendency of wages for that year. The number of changes in wages reported for 1894 is 589, of which 411 were increases and 178 decreases. The total number of individual employees affected by the changes for which full particulars were received was

592,000, of whom 160,000 gained a net increase and 432,000 sustained a net decrease. The total effect of the changes in wages in 1894 was a decrease. In this respect the year 1894 differs from 1893, in which the effect of the decline was for the time more than counterbalanced by temporary increases in miners' wages. In 1894 there was a widespread fall in miners' wages, affecting over 380,000 persons.

If the mining, metal, and glass bottle making industries be excluded, it will be found that the remaining industries show in the aggregate an increase. If increases be balanced against decreases, a slight rise appears to have taken place in the cotton, boot and shoe, and printing industries, while in the engineering, shipbuilding, and some other groups wages remained throughout 1894 practically as they were at the end of 1893.

The aggregate number of employees (not necessarily separate individuals) involved in the wage changes, so far as reported for 1894, was 1,070,000, of whom 281,000 were involved in increases and 789,000 in decreases. A considerable part of this aggregate is accounted for by the Welsh miners, whose rates of wages changed no less than six times during the year, and who consequently figured six times in the total.

Reports have been received of 215 reductions of hours of labor in 1894, affecting 70,000 individuals, of whom about 42,000 were Government employees. The net effect of the changes in hours in 1894 was a decrease, as in 1893.

STANDARD PIECE RATES AND STANDARD TIME RATES.—This portion of the report presents selections from some of the more important lists of piece and time rates of wages in force in the year 1893. The lists shown are those prepared by various organizations of either employers or employees, or as agreed upon by both classes of organizations in the different trades, the object being to illustrate the working of the standard lists of wages by which many industries are governed. In some cases lists prepared by employers and employees, respectively, are placed in comparison, and, when practicable, data are also given for 1892.

It is not practicable to make a summary of the different lists, and the lack of space will not permit of a reproduction of any of them with the notes and text necessary to a proper understanding of the figures.

STRIKES IN SWITZERLAND IN RECENT YEARS.

The eighth annual report of the Comité Directeur de la Fédération Ouvrière Suisse, 1894, contains a historical review of strikes, lockouts, and employees' demands, followed by statistical summaries, covering the period of 1860 to 1894, inclusive.

The information, as explained by the editor, has been obtained largely from labor journals and other publications, but unfortunately the files of some of the most important periodicals were incomplete and other important journals could not be obtained, especially for the earlier periods. Frequently the information found was very meager, and in such cases the missing data were sought by correspondence. But this means of obtaining information was only partly successful. While thus there are many gaps in the statistics presented, they are sufficiently complete to furnish some idea of this feature of the labor movement in Switzerland. The following table shows the number of strikes, lockouts, and demands amicably settled, and their results:

STRIKES, LOCKOUTS, AND DEMANDS, BY RESULTS, 1860 TO 1894.

Year.	Demands not resulting in strikes.					Strikes.					Lockouts.				
	Suc- ceed- ed.	Suc- ceed- ed part- ly.	Fail- ed.	Not re- port- ed.	To- tal.	Suc- ceed- ed.	Suc- ceed- ed part- ly.	Fail- ed.	Not re- port- ed.	To- tal.	Suc- ceed- ed.	Suc- ceed- ed part- ly.	Fail- ed.	Not re- port- ed.	To- tal.
1860						1		1		2	1				1
1861	4				4			1		1					
1862	1		1		2										
1863	2				2										
1864	2				2										
1865	2			1	3										
1866						1			4	5					
1867			1		1			1		1					
1868						8	2	2		12			1		1
1869	10		3	2	15	7		3		10				1	1
1870	1			2	3	2		3	2	7				1	1
1871	2		3		5	3	1	2	1	7			1		1
1872	7		2	4	13	9	2	6		17			1		1
1873	4	2			6	2	6	5	1	14					
1874	1			2	3	3			4	7					
1875	1				1	5	1	1	2	9					
1876	1				1	2	1	4		7					
1877								3		3					
1878						2	1			3					
1879															
1880								1		1					
1881							1	2	1	4					
1882															
1883						2			1	3					
1884						1			1	2					
1885	1				1	11			4	17					
1886	8		1	2	11	6		5		11					
1887	1	1			2	13		2	2	17			2		2
1888	3		2		5	4	3	2	1	10					
1889	18	3	3	1	25	14	2	4	1	21					
1890	17	3	4	9	33	10	5	4	1	20					
1891	13	9	5	4	31	21	1	6	4	32				1	1
1892	9	1	2	1	13	15	3	5	1	24	1				1
1893		2	4	1	7	11	1	3	2	17					
1894	5	4	6		15	7	5	9	1	22					
Total..	113	25	37	29	204	160	35	77	34	306	2	.....	5	3	10

It will be noticed that the number of successful and partly successful demands and strikes greatly exceeds that of the number of failures. This, it is explained, may be due to some extent to the lack of complete data and to the sources of information. Nevertheless, the excess of successful over unsuccessful demands and strikes shown in more recent years, when almost complete returns were obtained, would seem to indicate that, in general, the relative results are fairly accurate.

The following table shows the strikes, demands, and lockouts by causes. Owing to lack of space successful and partly successful labor disputes were combined in one column, and those that failed and those whose results were not reported are consolidated in another. While the latter grouping may not be entirely fair, it is claimed that it is justified on the ground that, in general, the results would have been announced in the labor journals had they been successful. Under the reduction of hours are also included strikes and other disputes where shorter hours was one of several demands, because, as a rule, this was the most important of the demands made in such cases:

STRIKES, LOCKOUTS, AND DEMANDS, BY CAUSES, 1860 TO 1894.

[Under dismissals and lockouts the strikes, lockouts, and demands are reported as having succeeded, succeeded partly, or failed, according as the employees succeeded, succeeded partly, or failed.]

Year.	For reduction of hours.		For increase of wages.		For other improvements.		Against increase of hours.		Against reduction of wages.		Dismissals and lockouts.		Against other acts of employers.		Total.	
	Succeeded and succeeded partly.	Failed and not reported.	Succeeded and succeeded partly.	Failed and not reported.	Succeeded and succeeded partly.	Failed and not reported.	Succeeded and succeeded partly.	Failed and not reported.	Succeeded and succeeded partly.	Failed and not reported.	Succeeded and succeeded partly.	Failed and not reported.	Succeeded and succeeded partly.	Failed and not reported.	Succeeded and succeeded partly.	Failed and not reported.
1860...	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	1	1	2
1861...	.....	.....	4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	1
1862...	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
1863...	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
1864...	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
1865...	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	2	1
1866...	1	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	1	4
1867...	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
1868...	8	.....	2	.....	.....	1	.....	.....	.....	1	1	.....	.....	.....	11	2
1869...	4	2	11	6	2	.....	.....	.....	.....	.....	.....	.....	1	.....	18	8
1870...	1	2	1	5	.....	.....	.....	1	1	.....	.....	.....	.....	.....	3	8
1871...	3	3	2	1	1	.....	.....	.....	.....	2	1	.....	.....	.....	7	6
1872...	10	5	5	6	1	1	.....	.....	2	.....	1	.....	.....	.....	19	12
1873...	7	3	7	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14	6
1874...	.....	5	3	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	4	6
1875...	3	.....	3	2	.....	.....	.....	.....	1	.....	.....	.....	.....	1	7	3
1876...	.....	2	2	2	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	4	4
1877...	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	3
1878...	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	3	.....
1879...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1880...	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
1881...	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	3
1882...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1883...	.....	.....	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2	1
1884...	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
1885...	3	.....	7	2	.....	.....	.....	1	2	.....	.....	.....	.....	.....	12	6
1886...	8	4	5	2	1	.....	.....	.....	.....	1	.....	1	.....	.....	14	8
1887...	2	.....	4	.....	.....	.....	.....	.....	4	4	2	.....	5	.....	17	4
1888...	5	1	1	2	.....	.....	.....	.....	4	2	.....	.....	.....	.....	10	5
1889...	9	1	23	6	1	.....	.....	.....	3	1	1	1	.....	.....	37	9
1890...	22	10	5	3	1	1	1	1	4	2	1	1	1	.....	35	18
1891...	17	7	16	4	.....	.....	.....	.....	9	5	2	4	.....	.....	44	20
1892...	7	2	5	2	.....	.....	1	1	11	4	3	1	.....	.....	28	10
1893...	4	4	3	2	.....	1	.....	.....	6	2	.....	.....	1	1	14	10
1894...	11	8	4	1	2	.....	.....	1	2	5	2	.....	.....	1	21	16
Total.	126	59	121	52	10	10	4	5	55	41	14	8	9	6	389	181

The following summary, taken by five-year periods, is interesting as showing the progress of the movement for shorter working days:

DEMANDS AND STRIKES FOR REDUCTION OF HOURS, BY FIVE-YEAR PERIODS, 1865 TO 1894.

Years.	Demands and strikes for—							
	11 hours per day.		10 hours per day.		9 hours per day.		Time not reported.	
	Suc- ceeded and succeeded partly.	Failed and result not re- ported.	Suc- ceeded and succeeded partly	Failed and result not re- ported.	Suc- ceeded and succeeded partly.	Failed and result not re- ported.	Suc- ceeded and succeeded partly.	Failed and result not re- ported.
1865-1869.....	4	.....	9	2	.....	.....	.....	.....
1870-1874.....	6	4	13	9	1	.....	1	5
1875-1879.....	1	1	2	1	.....	.....	.....	.....
1880-1884.....	1	.....	.....	.....	.....	.....	.....	.....
1885-1889.....	3	1	23	3	.....	.....	1	2
1890-1894.....	3	1	49	25	4	5	5	.....
Total.....	18	7	96	40	5	5	7	7

The next table shows the strikes, lockouts, and demands by occupations for the period of thirty-five years from 1860 to 1894:

STRIKES, LOCKOUTS, AND DEMANDS, BY OCCUPATIONS, 1860-1894.

Occupation.	Demands not resulting in strikes.			Strikes.			Lockouts.		
	Suc- ceeded and suc- ceeded partly.	Failed.	Not re- ported.	Suc- ceeded and suc- ceeded partly.	Failed.	Not re- ported.	Suc- ceeded and suc- ceeded partly.	Failed.	Not re- ported.
Printers.....	36	2	1	7	13	3	1	.....	.....
Bindery employees.....	2	2	1	2	3	.....	.....	.....	.....
Stonecutters.....	4	2	1	2	1	1	.....	.....	1
Masons.....	5	5	2	8	2	2	1	.....	.....
Roofers.....	.....	.....	1	6	.....	1	.....	.....	.....
Excavators.....	1	1	.....	3	2	2	.....	.....	.....
Potters and stove makers.....	1	2	2	2	.....	.....	.....	.....	.....
Carpenters.....	2	.....	3	15	3	1	.....	.....	.....
Joiners.....	13	3	5	22	10	3	.....	1	.....
Glaziers.....	.....	.....	.....	8	2	.....	.....	1	.....
Painters.....	6	2	2	3	2	1	.....	.....	.....
Watchmakers.....	4	1	.....	21	1	2	.....	1	1
Engravers and watch case makers.....	.....	.....	.....	11	4	1	.....	.....	.....
Jewelers.....	1	.....	.....	4	.....	2	.....	.....	.....
Tailors.....	10	.....	.....	22	4	1	.....	.....	.....
Shoemakers.....	11	2	.....	11	6	4	.....	.....	.....
Other clothing trades.....	1	.....	.....	1	.....	1	.....	.....	.....
Molders.....	.....	1	.....	2	2	1	.....	.....	.....
Machinist.....	1	6	2	3	2	.....	.....	.....	.....
Ironworkers.....	6	.....	.....	2	3	1	.....	.....	.....
Tinsmiths.....	6	2	.....	9	.....	1	1	.....	.....
Blacksmiths and wagon makers.....	6	2	1	9	3	.....	.....	.....	.....
Employees in weaving es- tablishments.....	5	3	2	9	7	3	.....	2	.....
Dyers, etc.....	4	.....	.....	4	2	.....	.....	.....	.....
Employees in tobacco works.....	2	.....	.....	3	3	.....	.....	.....	.....
Brewers.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Coopers.....	.....	.....	.....	5	.....	1	.....	.....	.....
Saddlers.....	3	.....	2	2	.....	.....	.....	.....	.....
Miscellaneous.....	6	1	4	.....	2	1	.....	.....	.....
Total.....	138	37	29	196	77	33	3	5	2

The report calls attention to the fact that the statistics for the printing trade are the most complete, because the printers have long been

well organized, and have published a special trade journal. This table shows that while there were in all 39 demands that were amicably settled, only 21 strikes and lockouts are reported. In the totals for the other occupations the reverse condition is found, namely, 165 demands as against 295 strikes and lockouts. This result in the case of the printers is probably due to their superior skill and better organization.

In order to better illustrate the effects of labor organization in reference to disputes between employees and their employers, the following summary is presented of the number of demands amicably settled, and of offensive and defensive strikes—lockouts being classed with the latter.

DEMANDS NOT FOLLOWED BY STRIKES AND STRIKES COMPARED.

Years.	Demands not fol- lowed by strikes.	Offensive strikes.	Defensive strikes.
1860-1864	10	2	2
1865-1869	19	24	6
1870-1874	30	43	12
1875-1879	2	11	11
1880-1884 .....	.....	2	8
1885-1889	44	44	34
1890-1894	99	63	54

During the first five-year period nearly all the disputes affected only the printers, which fact accounts for the great excess of demands over strikes. In the two succeeding periods other occupations appear, hence the number of offensive strikes is greatest. During the next two periods, the industrial crisis reduced the number of labor disputes to a minimum. In the sixth period of the summary the influence of the organization of the Swiss reserve fund (Caisse Suisse de Réserve) becomes apparent. Notwithstanding the rapidly increasing number of labor disputes, the number of demands amicably settled equals that of the offensive strikes, while the number of defensive strikes is quite considerable. During the last period the number of demands amicably settled considerably exceeds either that of the offensive or of the defensive strikes. This result is due to the thorough organization of the federation of labor unions and to the activity of their executive committee.

NOTES CONCERNING THE MONEY OF THE UNITED STATES AND OTHER COUNTRIES.

BY WILLIAM C. HUNT.

The following information relative to money has been compiled from the report of the Director of the Mint, and includes a brief statement concerning the monetary system of the United States; the value of the coins of the United States, together with the authority for coining and total amount coined; the value of the pure silver in a United States silver dollar, as compared with the market price of silver; the commercial ratio of silver to gold since 1687; the total production of the precious metals in the world since the discovery of America, and in the United States since 1792; the values of foreign coins expressed in terms of the United States gold dollar, and the approximate stocks of money in the principal countries of the world at the present time.

The widespread interest that is now being taken in information of this nature affords ample justification for its reproduction in the Bulletin of this Department.

MONETARY SYSTEM OF THE UNITED STATES.—In 1786 the Congress of the Confederation chose as the monetary unit of the United States the dollar of 375.64 grains of pure silver. This unit had its origin in the Spanish piaster, or milled dollar, which constituted the basis of the metallic circulation of the English colonies in America. It was never coined, there being at that time no mint in the United States.

The act of April 2, 1792, established the first monetary system of the United States. The bases of the system were: The gold dollar, containing 24.75 grains of pure gold, and stamped in pieces of \$10, \$5, and \$2½ (denominated, respectively, eagles, half eagles, and quarter eagles), and the silver dollar, containing 371.25 grains of pure silver. A mint was established. The coinage was unlimited and there was no mint charge. The ratio of gold to silver in coinage was 1:15. Both gold and silver were legal tender. The standard was double.

The act of 1792 undervalued gold, which was therefore exported. The act of June 28, 1834, was passed to remedy this, by changing the mint ratio between the metals to 1:16.002. This latter act fixed the weight of the gold dollar at 25.8 grains, but lowered the fineness from 0.916⅔ to 0.899225. The fine weight of the gold dollar was thus reduced to 23.2 grains. The act of 1834 undervalued silver as that of 1792 had

undervalued gold, and silver was attracted to Europe by the more favorable ratio of 1:15½. The act of January 18, 1837, was passed to make the fineness of the gold and silver coins uniform. The legal weight of the gold dollar was fixed at 25.8 grains, and its fine weight at 23.22 grains. The fineness was, therefore, changed by this act to 0.900 and the ratio to 1:15.988+.

Silver continued to be exported. The act of February 21, 1853, reduced the weight of the silver coins of a denomination less than \$1, which the acts of 1792, 1834, and 1837 had made exactly proportional to the weight of the silver dollar, and provided that they should be legal tender to the amount of only \$5. Under the acts of 1792, 1834, and 1837 they had been full legal tender. By the act of 1853 the legal weight of the half dollar was reduced to 192 grains and that of the other fractions of the dollar in proportion. The coinage of the fractional parts of the dollar was reserved to the Government.

The act of February 12, 1873, provided that the unit of value of the United States should be the gold dollar of the standard weight of 25.8 grains, and that there should be coined besides the following gold coins: A quarter eagle, or 2½-dollar piece; a 3-dollar piece; a half eagle, or 5-dollar piece; an eagle, or 10-dollar piece, and a double eagle, or 20-dollar piece—all of a standard weight proportional to that of the dollar piece. These coins were made legal tender in all payments at their nominal value when not below the standard weight and limit of tolerance provided in the act for the single piece, and when reduced in weight they should be legal tender at a valuation in proportion to their actual weight. The silver coins provided for by the act were a trade dollar, a half dollar, or 50-cent piece, a quarter dollar, and a 10-cent piece; the weight of the trade dollar to be 420 grains Troy; the half dollar, 12½ grams; the quarter dollar and the dime, respectively, one-half and one-fifth of the weight of the half dollar. The silver coins were made legal tender at their nominal value for any amount not exceeding \$5 in any one payment. The charge for converting standard gold bullion into coin was fixed at one-fifth of 1 per cent. Owners of silver bullion were allowed to deposit it at any mint of the United States to be formed into bars or into trade dollars, and no deposit of silver for other coinage was to be received.

Section II of the joint resolution of July 22, 1876, recited, that the trade dollar should not thereafter be legal tender, and that the Secretary of the Treasury should be authorized to limit the coinage of the same to an amount sufficient to meet the export demand for it. The act of March 3, 1887, retired the trade dollar and prohibited its coinage. That of September 26, 1890, discontinued the coinage of the 1-dollar and 3-dollar gold pieces.

The act of February 28, 1878, directed the coinage of silver dollars of the weight of 412½ grains Troy, of standard silver, as provided in the act of January 18, 1837, and that such coins, with all silver coins

theretofore coined, should be legal tender at their nominal value for all debts and dues, public and private, except where otherwise expressly stipulated in the contract.

The Secretary of the Treasury was authorized and directed by the first section of the act to purchase from time to time silver bullion at the market price thereof, not less than \$2,000,000 worth nor more than \$4,000,000 worth per month, and to cause the same to be coined monthly, as fast as purchased, into such dollars. A subsequent act, that of July 14, 1890, enacted that the Secretary of the Treasury should purchase silver bullion to the aggregate amount of 4,500,000 ounces, or so much thereof as might be offered, each month, at the market price thereof, not exceeding \$1 for 371.25 grains of pure silver, and to issue in payment thereof Treasury notes of the United States, such notes to be redeemable by the Government, on demand, in coin, and to be legal tender in payment of all debts, public and private, except where otherwise expressly stipulated in the contract. The act directed the Secretary of the Treasury to coin each month 2,000,000 ounces of the silver bullion purchased under the provisions of the act into standard silver dollars until the 1st day of July, 1891, and thereafter as much as might be necessary, to provide for the redemption of the Treasury notes issued under the act. The purchasing clause of the act of July 14, 1890, was repealed by the act of November 1, 1893.

The act of June 9, 1879, made the subsidiary silver coins of the United States legal tender to the amount of \$10. The minor coins are legal tender to the amount of 25 cents.

GOLD, SILVER, AND MINOR COINS OF THE UNITED STATES.—The following table shows the denominations of the gold, silver, and minor coins of the United States which have been authorized by Congress, giving the dates of the acts authorizing their coinage, their original weight and fineness (or composition in the case of the minor coins), changes in weight and fineness authorized by subsequent acts of Congress, the dates of the acts discontinuing their coinage in certain cases, and the total amount coined to June 30, 1895. In those cases where their coinage has been discontinued by act of Congress, the figures given in the last column of the table represent the total amount coined to the date of that act as given in the column immediately preceding. In the case of the Columbian half dollar and Columbian quarter dollar, the figures represent the total amount coined under the special act by which their coinage was authorized:

AUTHORITY FOR COINING, CHANGES IN WEIGHT AND FINENESS, AND AMOUNT
COINED, FOR EACH COIN.

Denomination.	Act authorizing coinage or change in weight or fineness.	Weight (grains).	Fine- ness.	Act discontinuing coinage.	Total amount coined to June 30, 1895.
GOLD COINS.					
Double eagle (\$20).....	March 3, 1849	516	.900	.....	\$1,225,818,760.00
Eagle (\$10)	April 2, 1792	270	.916 $\frac{2}{3}$	.....	} 262,380,780.00
	June 28, 1834	258	.899225	.....
	January 18, 1837 .....	.....	.900	.....	} 217,814,395.00
Half eagle (\$5)	April 2, 1792	135	.916 $\frac{2}{3}$	.....
	June 28, 1834	129	.899225	.....	} 28,681,115.00
	January 18, 1837 .....	.....	.900	.....
Quarter eagle (\$2.50)	April 2, 1792	67.5	.916 $\frac{2}{3}$	.....	} 1,619,376.00
	June 28, 1834	64.5	.899225	.....
	January 18, 1837 .....	.....	.900	.....	} 19,499,337.00
Three-dollar piece.....	February 21, 1853..	77.4	.900	September 26, 1890.	
One dollar.....	March 3, 1849	25.8	.900	September 26, 1890.	
SILVER COINS.					
Dollar.....	April 2, 1792.....	416	.8924	.....	} <i>a</i> 431,320,457.00
	January 18, 1837..	412 $\frac{1}{2}$	.900	February 12, 1873..	
	February 28, 1878..	.....		.....	} 35,965,924.00
Trade dollar (<i>b</i>).....	February 12, 1873..	420	.900	March 3, 1887.....	
Half dollar	April 2, 1792	208	.8924	.....	} 130,857,276.50
	January 18, 1837..	206 $\frac{1}{4}$	.900	.....
	February 21, 1853..	192		.....	} <i>d</i> 2,501,052.50
	February 12, 1873..	<i>c</i> 192.9		.....
Columbian half dollar....	August 5, 1892....	192.9	.900	.....	} <i>d</i> 10,005.75
Quarter dollar.....	April 2, 1792	104	.8924	.....
	January 18, 1837..	103 $\frac{3}{8}$	.900	.....	} 49,160,461.25
	February 21, 1853..	96		.....
	February 12, 1873..	<i>e</i> 96.45		.....	} 271,000.00
Columbian quarter dollar	March 3, 1893	96.45	.900	.....
Twenty-cent piece	March 3, 1875	<i>f</i> 77.16	.900	May 2, 1878	} 28,775,218.30
Dime.....	April 2, 1792	41.6	.8924	.....
	January 18, 1837 ..	41 $\frac{1}{4}$	.900	.....	} 4,880,219.40
	February 21, 1853 ..	38.4		.....
	February 12, 1873 ..	<i>g</i> 38.58		.....	} 1,282,087.20
Half dime.....	April 2, 1792	20.8	.8924	.....
	January 18, 1837 ..	20 $\frac{5}{8}$	.900	.....	} 1,282,087.20
	February 21, 1853 ..	19.2		February 12, 1873 ..	
Three-cent piece	March 3, 1851	12 $\frac{3}{8}$	.750	.....	} 1,282,087.20
	March 3, 1853	11.52	.900	February 12, 1873 ..	
MINOR COINS.					
Five cent (nickel).....	May 16, 1866.....	77.16	(<i>h</i>)	.....	13,884,582.20
Three cent (nickel).....	March 3, 1865	30	(<i>h</i>)	September 26, 1890 ..	941,349.48
Two cent (bronze).....	April 22, 1864	96	(<i>i</i>)	February 12, 1873 ..	912,020.00
Cent (copper)	April 2, 1792	264		.....	} 1,562,887.44
	January 14, 1793....	208		.....
	January 26, 1796 (<i>j</i>) ..	168		February 21, 1857 ..	} 2,007,720.00
Cent (nickel).....	February 21, 1857 ..	72	(<i>k</i>)	April 22, 1864	
Cent (bronze)	April 22, 1864	48	(<i>i</i>)	.....	} 7,612,226.12
Half cent (copper).....	April 2, 1792.....	132		.....
	January 14, 1793....	104		.....	} 39,926.11
	January 26, 1796 (<i>j</i>) ..	84		February 21, 1857 ..	

a Amount coined to February 12, 1873, \$8,031,238.

b Coinage limited to export demand, joint resolution, July 22, 1876.

c 12 $\frac{1}{2}$ grams, or 192.9 grains.

d Total amount coined.

e 6 $\frac{1}{4}$ grams, or 96.45 grains.

f 5 grams, or 77.16 grains.

g 2 $\frac{1}{2}$ grams, or 38.58 grains.

h Composed of 75 per cent copper and 25 per cent nickel.

i Composed of 95 per cent copper and 5 per cent tin and zinc.

j By proclamation of the President, in conformity with act of March 3, 1795.

k Composed of 88 per cent copper and 12 per cent nickel.

The total coinages to June 30, 1895, are as follows: Gold, \$1,755,813,763; silver, \$685,023,701.90; minor, \$26,960,711.35; a grand total of \$2,467,798,176.25.

VALUE OF THE SILVER IN A UNITED STATES SILVER DOLLAR.—
The following table shows the value of the pure silver in a United States silver dollar, reckoned at the commercial price of silver bullion from \$0.50 to \$1.2929 (parity) per fine ounce:

VALUE OF PURE SILVER IN A UNITED STATES SILVER DOLLAR ACCORDING TO
PRICE OF SILVER BULLION.

Price of silver per fine ounce.	Value of pure silver in a silver dollar.	Price of silver per fine ounce.	Value of pure silver in a silver dollar.	Price of silver per fine ounce.	Value of pure silver in a silver dollar.
\$0.50	\$0.387	\$0.77	\$0.596	\$1.04	\$0.804
.51	.394	.78	.603	1.05	.812
.52	.402	.79	.611	1.06	.820
.53	.410	.80	.619	1.07	.828
.54	.418	.81	.626	1.08	.835
.55	.425	.82	.634	1.09	.843
.56	.433	.83	.642	1.10	.851
.57	.441	.84	.650	1.11	.859
.58	.449	.85	.657	1.12	.866
.59	.456	.86	.665	1.13	.874
.60	.464	.87	.673	1.14	.882
.61	.472	.88	.681	1.15	.889
.62	.480	.89	.688	1.16	.897
.63	.487	.90	.696	1.17	.905
.64	.495	.91	.704	1.18	.913
.65	.503	.92	.712	1.19	.920
.66	.510	.93	.719	1.20	.928
.67	.518	.94	.727	1.21	.936
.68	.526	.95	.735	1.22	.944
.69	.534	.96	.742	1.23	.951
.70	.541	.97	.750	1.24	.959
.71	.549	.98	.758	1.25	.967
.72	.557	.99	.766	1.26	.975
.73	.565	1.00	.773	1.27	.982
.74	.572	1.01	.781	1.28	.990
.75	.580	1.02	.789	1.29	.998
.76	.588	1.03	.797	a 1.2929	1.00

a Parity.

The following table shows the highest, lowest, and average value of a United States silver dollar, measured by the market price of silver, and the quantity of silver purchasable with a silver dollar at the average London price of silver, for each calendar year from 1873 to 1894:

BULLION VALUE AND PURCHASING POWER IN SILVER OF A UNITED STATES SILVER DOLLAR, 1873 TO 1894.

Year.	Bullion value of a silver dollar.			Grains of pure silver at average price purchasable with a United States silver dollar (a).
	Highest.	Lowest.	Average.	
1873.....	\$1. 016	\$0. 981	\$1. 004	369. 77
1874.....	1. 008	. 970	. 988	375. 76
1875.....	. 977	. 941	. 964	385. 11
1876.....	. 991	. 792	. 894	415. 27
1877.....	. 987	. 902	. 929	399. 62
1878.....	. 936	. 839	. 891	416. 66
1879.....	. 911	. 828	. 868	427. 70
1880.....	. 896	. 875	. 886	419. 49
1881.....	. 896	. 862	. 881	421. 87
1882.....	. 887	. 847	. 878	422. 83
1883.....	. 868	. 847	. 858	432. 69
1884.....	. 871	. 839	. 861	431. 18
1885.....	. 847	. 794	. 823	451. 09
1886.....	. 797	. 712	. 769	482. 77
1887.....	. 799	. 733	. 758	489. 78
1888.....	. 755	. 706	. 727	510. 66
1889.....	. 752	. 746	. 724	512. 93
1890.....	. 926	. 740	. 810	458. 83
1891.....	. 827	. 738	. 764	485. 76
1892.....	. 742	. 642	. 674	550. 79
1893.....	. 655	. 513	. 604	615. 10
1894.....	. 538	. 457	. 491	756. 04

a 371.25 grains of pure silver are contained in a silver dollar.

PRODUCTION OF GOLD AND SILVER IN THE UNITED STATES AND IN THE WORLD.—The following table shows the production of the precious metals in the world for each calendar year from 1873 to 1894. The silver product is given at its commercial value, reckoned at the average market price of silver each year, as well as at its coining value in United States dollars:

PRODUCTION OF GOLD AND SILVER IN THE WORLD FOR EACH CALENDAR YEAR FROM 1873 TO 1894.

Year.	Gold.		Silver.		
	Fine ounces.	Value.	Fine ounces.	Commercial value.	Coining value.
1873	4, 653, 675	\$96, 200, 000	63, 267, 187	\$82, 120, 800	\$81, 800, 000
1874	4, 390, 031	90, 750, 000	55, 300, 781	70, 674, 400	71, 500, 000
1875	4, 716, 562	97, 500, 000	62, 261, 719	77, 578, 100	80, 500, 000
1876	5, 016, 488	103, 700, 000	67, 753, 125	78, 322, 600	87, 600, 000
1877	5, 512, 196	113, 947, 200	62, 679, 916	75, 278, 600	81, 040, 700
1878	5, 761, 114	119, 092, 800	73, 385, 451	84, 540, 000	94, 882, 200
1879	5, 262, 174	108, 778, 800	74, 383, 495	83, 532, 700	96, 172, 600
1880	5, 148, 880	106, 436, 800	74, 795, 273	85, 640, 600	96, 705, 000
1881	4, 983, 742	103, 023, 100	79, 020, 872	89, 925, 700	102, 168, 400
1882	4, 934, 086	101, 996, 600	86, 472, 091	98, 232, 300	111, 802, 300
1883	4, 614, 588	95, 392, 000	89, 175, 023	98, 984, 300	115, 297, 000
1884	4, 921, 169	101, 729, 600	81, 567, 801	90, 785, 000	105, 461, 400
1885	5, 245, 572	108, 435, 600	91, 609, 959	97, 518, 800	118, 445, 200
1886	5, 135, 679	106, 163, 900	93, 297, 290	92, 793, 500	120, 626, 800
1887	5, 116, 861	105, 774, 900	96, 123, 586	94, 031, 000	124, 281, 000
1888	5, 330, 775	110, 196, 900	108, 827, 606	102, 185, 900	140, 706, 400
1889	5, 973, 790	123, 489, 200	120, 213, 611	112, 414, 100	155, 427, 700
1890	5, 749, 306	118, 848, 700	126, 095, 062	131, 937, 000	163, 032, 000
1891	6, 320, 194	130, 650, 000	137, 170, 919	135, 500, 200	177, 352, 300
1892	7, 102, 180	146, 815, 100	153, 151, 762	133, 404, 400	198, 014, 400
1893	7, 608, 787	157, 287, 600	166, 092, 047	129, 551, 800	214, 745, 300
1894	8, 737, 788	180, 626, 100	167, 752, 561	106, 522, 900	216, 892, 200
Total	122, 235, 638	2, 526, 834, 900	2, 130, 397, 137	2, 151, 474, 700	2, 754, 452, 900

The total production of gold and silver in the world since 1493 is shown in the first of the following tables. The second table shows the production of gold and silver from the mines of the United States by periods of years from 1792 to 1844, and annually from 1845 to 1894.

PRODUCTION OF GOLD AND SILVER IN THE WORLD SINCE THE DISCOVERY OF AMERICA.

[Production for 1493 to 1885 is from a table of averages for certain periods compiled by Dr. Adolph Soetbeer. For the years 1886 to 1894 the production is the annual estimate of the Bureau of the Mint.]

Years.	Gold.			
	Annual average for period.		Total for period.	
	Fine ounces.	Value.	Fine ounces.	Value.
1493-1520	186,470	\$3,855,000	5,221,160	\$107,931,000
1521-1544	230,194	4,759,000	5,524,656	114,205,000
1545-1560	273,596	5,656,000	4,377,544	90,492,000
1561-1580	219,906	4,546,000	4,398,120	90,917,000
1581-1600	237,267	4,905,000	4,745,340	98,095,000
1601-1620	273,918	5,662,000	5,478,360	113,248,000
1621-1640	266,845	5,516,000	5,336,900	110,324,000
1641-1660	281,955	5,828,000	5,639,110	116,571,000
1661-1680	297,709	6,154,000	5,954,180	123,084,000
1681-1700	346,095	7,154,000	6,921,895	143,088,000
1701-1720	412,163	8,520,000	8,243,260	170,403,000
1721-1740	613,422	12,681,000	12,268,440	253,611,000
1741-1760	791,211	16,356,000	15,824,230	327,116,000
1761-1780	665,666	13,761,000	13,313,315	275,211,000
1781-1800	571,948	11,823,000	11,438,970	236,464,000
1801-1810	571,563	11,815,000	5,715,627	118,152,000
1811-1820	367,957	7,606,000	3,679,568	76,063,000
1821-1830	457,044	9,448,000	4,570,444	94,479,000
1831-1840	652,291	13,484,000	6,522,913	134,841,000
1841-1850	1,760,502	36,393,000	17,605,018	363,928,000
1851-1855	6,410,324	132,513,000	32,051,621	662,566,000
1856-1860	6,486,262	134,083,000	32,431,312	670,415,000
1861-1865	5,949,582	122,989,000	29,747,913	614,944,000
1866-1870	6,270,086	129,614,000	31,350,430	648,071,000
1871-1875	5,591,014	115,577,000	27,955,068	577,883,000
1876-1880	5,543,110	114,586,000	27,715,550	572,931,000
1881-1885	4,794,755	99,116,000	23,973,773	495,582,000
1886	5,135,679	106,163,900	5,135,679	106,163,900
1887	5,116,861	105,774,900	5,116,861	105,774,900
1888	5,330,775	110,196,900	5,330,775	110,196,900
1889	5,973,790	123,489,200	5,973,790	123,489,200
1890	5,749,306	118,848,700	5,749,306	118,848,700
1891	6,320,194	130,650,000	6,320,194	130,650,000
1892	7,102,180	146,815,100	7,102,180	146,815,100
1893	7,608,787	157,287,600	7,608,787	157,287,600
1894	8,737,788	180,626,100	8,737,788	180,626,100
Total .....	.....	.....	415,080,077	8,580,467,400

PRODUCTION OF GOLD AND SILVER IN THE WORLD SINCE THE DISCOVERY OF AMERICA.

[Production for 1493 to 1885 is from a table of averages for certain periods compiled by Dr. Adolph Boetbeer. For the years 1886 to 1894 the production is the annual estimate of the Bureau of the Mint.]

Silver.				Percentage of production.			
Annual average for period.		Total for period.		By weight.		By value.	
Fine ounces.	Coining value.	Fine ounces.	Coining value.	Gold.	Silver.	Gold.	Silver.
1,511,050	\$1,954,000	42,309,400	\$54,703,000	11	89	66.4	33.6
2,899,930	3,749,000	69,598,320	89,986,000	7.4	92.6	55.9	44.1
10,017,940	12,952,000	160,287,040	207,240,000	2.7	97.3	30.4	69.6
9,628,925	12,450,000	192,578,500	248,990,000	2.2	97.8	26.7	73.3
13,467,635	17,413,000	269,352,700	348,254,000	1.7	98.3	22	78
13,596,235	17,579,000	271,924,700	351,579,000	2	98	24.4	75.6
12,654,240	16,361,000	253,084,800	327,221,000	2.1	97.9	25.2	74.8
11,776,545	15,226,000	35,530,900	304,525,000	2.3	97.7	27.7	72.3
10,834,550	14,008,000	216,691,000	280,166,000	2.7	97.3	30.5	69.5
10,992,085	14,212,000	219,841,700	284,240,000	3.1	96.9	33.5	66.5
11,432,540	14,781,000	228,650,800	295,629,000	3.5	96.5	36.6	63.4
13,863,080	17,924,000	277,261,600	358,480,000	4.2	95.8	41.4	58.6
17,140,612	22,162,000	342,812,235	443,232,000	4.4	95.6	42.5	57.5
20,985,591	27,133,000	419,711,820	542,658,000	3.1	96.9	33.7	66.3
28,261,779	36,540,000	565,235,580	730,810,000	2	98	24.4	75.6
28,746,922	37,168,000	287,469,225	371,677,000	1.9	98.1	24.1	75.9
17,385,755	22,479,000	173,857,555	224,786,000	2.1	97.9	25.3	74.7
14,807,004	19,144,000	148,070,040	191,444,000	3	97	33	67
19,175,867	24,793,000	191,758,675	247,930,000	3.3	96.7	35.2	64.8
25,090,342	32,440,000	250,903,422	324,400,000	6.6	93.4	52.9	47.1
28,488,597	36,824,000	142,442,986	184,169,000	18.4	81.6	78.2	21.7
29,095,428	37,618,000	145,477,142	188,092,000	18.2	81.8	78.1	21.9
35,401,972	45,772,000	177,009,862	228,861,000	14.4	85.6	72.9	27.1
43,051,583	55,663,000	215,257,914	278,313,000	12.7	87.3	70	30
63,317,014	81,864,000	316,585,069	409,322,000	8.1	91.9	58.5	41.5
78,775,602	101,851,000	393,878,009	509,256,000	6.6	93.4	53	47
92,003,944	118,955,000	460,019,722	594,773,000	5	95	45.5	54.5
93,297,290	120,626,800	93,297,290	120,626,800	5.2	94.8	46.8	53.2
96,123,586	124,281,000	96,123,586	124,281,000	5	95	45.9	54.1
108,827,606	140,706,400	108,827,606	140,706,400	4.6	95.4	43.9	56.1
120,213,611	155,427,700	120,213,611	155,427,700	4.7	95.3	44.3	55.7
126,095,062	163,032,000	126,095,062	163,032,000	4.3	95.7	42.1	57.9
137,170,919	177,352,300	137,170,919	177,352,300	4.4	95.6	42.4	57.6
153,151,762	198,014,400	153,151,762	198,014,400	4.4	95.6	42.5	57.5
166,092,047	214,745,300	166,092,047	214,745,300	4.4	95.6	42.4	57.6
167,752,561	216,892,200	167,752,561	216,892,200	4.9	95.1	45.6	54.4
.....	.....	7,836,325,160	10,131,814,100	5	95	45.6	54.4

PRODUCTION OF GOLD AND SILVER IN THE UNITED STATES FROM 1792 TO 1894.

[The estimate for 1792 to 1873 is by R. W. Raymond, Commissioner, and since by the Director of the Mint.]

Years.	Gold.	Silver.	Total.
April 2, 1792-July 31, 1834	\$14, 000, 000	Insignificant.	\$14, 000, 000
July 31, 1834-December 31, 1844	7, 500, 000	\$250, 000	7, 750, 000
1845	1, 008, 327	50, 000	1, 058, 327
1846	1, 139, 357	50, 000	1, 189, 357
1847	889, 085	50, 000	939, 085
1848	10, 000, 000	50, 000	10, 050, 000
1849	40, 000, 000	50, 000	40, 050, 000
1850	50, 000, 000	50, 000	50, 050, 000
1851	55, 000, 000	50, 000	55, 050, 000
1852	60, 000, 000	50, 000	60, 050, 000
1853	65, 000, 000	50, 000	65, 050, 000
1854	60, 000, 000	50, 000	60, 050, 000
1855	55, 000, 000	50, 000	55, 050, 000
1856	55, 000, 000	50, 000	55, 050, 000
1857	55, 000, 000	50, 000	55, 050, 000
1858	50, 000, 000	500, 000	50, 500, 000
1859	50, 000, 000	100, 000	50, 100, 000
1860	46, 000, 000	150, 000	46, 150, 000
1861	43, 000, 000	2, 000, 000	45, 000, 000
1862	39, 200, 000	4, 500, 000	43, 700, 000
1863	40, 000, 000	8, 500, 000	48, 500, 000
1864	46, 100, 000	11, 000, 000	57, 100, 000
1865	53, 225, 000	11, 250, 000	64, 475, 000
1866	53, 500, 000	10, 000, 000	63, 500, 000
1867	51, 725, 000	13, 500, 000	65, 225, 000
1868	48, 000, 000	12, 000, 000	60, 000, 000
1869	49, 500, 000	12, 000, 000	61, 500, 000
1870	50, 000, 000	16, 000, 000	66, 000, 000
1871	43, 500, 000	23, 000, 000	66, 500, 000
1872	36, 000, 000	28, 750, 000	64, 750, 000
1873	36, 000, 000	35, 750, 000	71, 750, 000
1874	33, 500, 000	37, 300, 000	70, 800, 000
1875	33, 400, 000	31, 700, 000	65, 100, 000
1876	39, 900, 000	38, 800, 000	78, 700, 000
1877	46, 900, 000	39, 800, 000	86, 700, 000
1878	51, 200, 000	45, 200, 000	96, 400, 000
1879	38, 900, 000	40, 800, 000	79, 700, 000
1880	36, 000, 000	39, 200, 000	75, 200, 000
1881	34, 700, 000	43, 000, 000	77, 700, 000
1882	32, 500, 000	46, 800, 000	79, 300, 000
1883	30, 000, 000	46, 200, 000	76, 200, 000
1884	30, 800, 000	48, 800, 000	79, 600, 000
1885	31, 800, 000	51, 600, 000	83, 400, 000
1886	35, 000, 000	51, 000, 000	86, 000, 000
1887	33, 000, 000	53, 350, 000	86, 350, 000
1888	33, 175, 000	59, 195, 000	92, 370, 000
1889	32, 800, 000	64, 646, 000	97, 446, 000
1890	32, 845, 000	70, 465, 000	103, 310, 000
1891	33, 175, 000	75, 417, 000	108, 592, 000
1892	33, 000, 000	82, 101, 000	115, 101, 000
1893	35, 955, 000	77, 576, 000	113, 531, 000
1894	39, 500, 000	64, 000, 000	103, 500, 000
Total.....	2, 013, 336, 769	1, 296, 850, 000	3, 310, 186, 769

VALUES OF FOREIGN COINS.—The following table gives the value of foreign coins on January 1, 1896, as estimated by the Director of the Mint, in pursuance of the provisions of section 25 of the act of August 28, 1894, as follows:

That the value of foreign coins as expressed in the money of account of the United States shall be that of the pure metal of such coin of standard value; and the values of the standard coins in circulation of the various nations of the world shall be estimated quarterly by the Director of the Mint and be proclaimed by the Secretary of the Treasury immediately after the passage of this act and thereafter quarterly on the 1st day of January, April, July, and October in each year.

VALUES OF FOREIGN COINS JANUARY 1, 1896, AS ESTIMATED BY THE DIRECTOR OF THE MINT.

Country.	Standard.	Monetary unit.
Argentina.....	Gold and silver.....	Peso.....
Austria-Hungary.....	Gold.....	Crown.....
Belgium.....	Gold and silver.....	Franc.....
Bolivia.....	Silver.....	Boliviano.....
Brazil.....	Gold.....	Milreis.....
British Possessions in North America (except Newfoundland).	Gold.....	Dollar.....
Central American States:		
Costa Rica.....	Silver.....	Peso.....
Guatemala.....		
Honduras.....		
Nicaragua.....		
Salvador.....		
Chile.....	Gold and silver.....	Peso.....
China.....	Silver.....	Tael..... <div><div>{</div><div>Shanghai..</div><div>Haikwan</div><div>(customs).</div><div>Tientsin...</div><div>Chefoo....</div><div>}</div></div>
Colombia.....	Silver.....	Peso.....
Cuba.....	Gold and silver.....	Peso.....
Denmark.....	Gold.....	Crown.....
Ecuador.....	Silver.....	Sucre.....
Egypt.....	Gold.....	Pound (100 piasters).....
Finland.....	Gold.....	Mark.....
France.....	Gold and silver.....	Franc.....
German Empire.....	Gold.....	Mark.....
Great Britain.....	Gold.....	Pound sterling.....
Greece.....	Gold and silver.....	Drachma.....
Haiti.....	Gold and silver.....	Gourde.....
India.....	Silver.....	Rupee.....
Italy.....	Gold and silver.....	Lira.....
Japan.....	Gold and silver (a).....	Yen..... <div><div>{</div><div>Gold...</div><div>Silver..</div><div>}</div></div>
Liberia.....	Gold.....	Dollar.....
Mexico.....	Silver.....	Dollar.....
Netherlands.....	Gold and silver.....	Florin.....
Newfoundland.....	Gold.....	Dollar.....
Norway.....	Gold.....	Crown.....
Persia.....	Silver.....	Kran.....
Peru.....	Silver.....	Sol.....
Portugal.....	Gold.....	Milreis.....
Russia.....	Silver (c).....	Ruble..... <div><div>{</div><div>Gold...</div><div>Silver..</div><div>}</div></div>
Spain.....	Gold and silver.....	Peseta.....
Sweden.....	Gold.....	Crown.....
Switzerland.....	Gold and silver.....	Franc.....
Tripoli.....	Silver.....	Mahbub of 20 piasters.....
Turkey.....	Gold.....	Piaster.....
Venezuela.....	Gold and silver.....	Bolivar.....

a Gold the nominal standard. Silver practically the standard.
c Silver the nominal standard. Paper the actual currency, the depreciation of which is measured by the gold standard.

VALUES OF FOREIGN COINS JANUARY 1, 1896, AS ESTIMATED BY THE DIRECTOR OF THE MINT.

Value in terms of United States gold dollar.	Coins.
\$0.965	Gold, argentine (\$4.824) and $\frac{1}{2}$ argentine; silver, peso and divisions.
.203	{ Gold, former system, 4 florins (\$1.929), 8 florins (\$3.858), ducat (\$2.287) and 4 ducats (\$9.149); silver, 1 and 2 florins; gold, present system, 20 crowns (\$4.052), 10 crowns (\$2.026).
.193	Gold, 10 and 20 francs; silver, 5 francs.
.491	Silver, boliviano and divisions.
.546	Gold, 5, 10, and 20 milreis; silver, $\frac{1}{2}$, 1, and 2 milreis.
1.000	
.491	Silver, peso and divisions.
.912	Gold, escudo (\$1.824), doubloon (\$4.561), and condor (\$9.123); silver, peso and divisions.
.725	
.808	
.769	
.759	
.491	Gold, condor (\$9.647) and double condor; silver, peso.
.926	Gold, doubloon (\$5.017); silver, peso.
.268	Gold, 10 and 20 crowns.
.491	Gold, condor (\$9.647) and double condor; silver, sucre and divisions.
4.943	Gold, pound (100 piasters), 5, 10, 20, and 50 piasters; silver, 1, 2, 5, 10, and 20 piasters
.193	Gold, 20 marks (\$3.859), 10 marks (\$1.93).
.193	Gold, 5, 10, 20, 50, and 100 francs; silver, 5 francs.
.238	Gold, 5, 10, and 20 marks.
4.866 $\frac{1}{2}$	Gold, sovereign (pound sterling) and $\frac{1}{2}$ sovereign.
.193	Gold, 5, 10, 20, 50, and 100 drachmas; silver 5 drachmas.
.965	Silver, gourde.
.233	Gold, mohur (\$7.105); silver, rupee and divisions.
.193	Gold, 5, 10, 20, 50, and 100 lire; silver, 5 lire.
.997	Gold, 1, 2, 5, 10, and 20 yen.
.529	Silver, yen.
1.000	
.533	Gold, dollar (\$0.983), 2 $\frac{1}{2}$, 5, 10, and 20 dollars; silver, dollar (or peso) and divisions.
.402	Gold, 10 florins; silver, $\frac{1}{2}$, 1, and 2 $\frac{1}{2}$ florins.
1.014	Gold, 2 dollars (\$2.027)
.268	Gold, 10 and 20 crowns.
.090	Gold, $\frac{1}{2}$, 1, and 2 tomans (\$3.409); silver, $\frac{1}{4}$, $\frac{1}{2}$, 1, 2, and 5 krans.
.491	Silver, sol and divisions.
1.080	Gold, 1, 2, 5, and 10 milreis.
.772	Gold, imperial (\$7.718) and $\frac{1}{2}$ imperial (b) (\$3.86).
.393	Silver, $\frac{1}{4}$, $\frac{1}{2}$, and 1 ruble.
.193	Gold, 25 pesetas; silver, 5 pesetas.
.268	Gold, 10 and 20 crowns.
.193	Gold, 5, 10, 20, 50, and 100 francs; silver, 5 francs.
.443	
.044	Gold, 25, 50, 100, 250, and 500 piasters.
.193	Gold, 5, 10, 20, 50, and 100 bolivars; silver, 5 bolivars.

b Coined since January 1, 1886. Old half-imperial = \$3.986.

MONETARY SYSTEMS AND APPROXIMATE STOCKS OF MONEY IN THE AGGREGATE
AND PER CAPITA IN THE PRINCIPAL COUNTRIES OF THE WORLD.

[This table of the monetary systems and the approximate stock of gold, silver, and uncovered obtainable, and, while necessarily but an estimate, is believed

	Countries.	Monetary system.	Ratio between gold and full legal-tender silver.	Ratio between gold and limited-tender silver.	Population.	Stock of gold.
1	United States (<i>a</i>)	Gold and silver.	1 to 15.98	1 to 14.95	70,400,000	\$618,100,000
2	United Kingdom	Gold.....	.....	1 to 14.28	38,900,000	<i>b</i> 580,000,000
3	France	Gold and silver.	1 to 15½	1 to 14.38	38,300,000	<i>b</i> 850,000,000
4	Germany	Gold.....	.....	1 to 13.957	51,200,000	<i>b</i> 625,000,000
5	Belgium	Gold and silver.	1 to 15½	1 to 14.38	6,300,000	<i>b</i> 55,000,000
6	Italy	Gold and silver.	1 to 15½	1 to 14.38	30,700,000	<i>c</i> 98,200,000
7	Switzerland	Gold and silver.	1 to 15½	1 to 14.38	3,000,000	<i>c</i> 14,900,000
8	Greece.....	Gold and silver.	1 to 15½	1 to 14.38	2,200,000	<i>b</i> 500,000
9	Spain	Gold and silver.	1 to 15½	1 to 14.38	17,500,000	<i>b</i> 40,000,000
10	Portugal.....	Gold.....	.....	1 to 14.08	5,100,000	<i>b</i> 38,000,000
11	Roumania	Gold and silver.	.....	.....	5,800,000	<i>c</i> 38,600,000
12	Servia	Gold and silver.	.....	.....	2,300,000	<i>c</i> 3,000,000
13	Austria-Hungary.....	Gold.....	.....	1 to 13.69	43,500,000	<i>b</i> 140,000,000
14	Netherlands	Gold and silver.	1 to 15½	1 to 15	4,700,000	<i>c</i> 29,200,000
15	Norway	Gold.....	.....	1 to 14.88	2,000,000	<i>b</i> 7,500,000
16	Sweden	Gold.....	.....	1 to 14.88	4,800,000	<i>c</i> 8,000,000
17	Denmark	Gold.....	.....	1 to 14.88	2,300,000	<i>c</i> 14,500,000
18	Russia and Finland.....	Silver.....	1 to 15½	1 to 12.90	126,000,000	<i>b</i> 480,000,000
19	Turkey	Gold and silver.	1 to 15½	1 to 15½	22,000,000	<i>b</i> 50,000,000
20	Australia.....	Gold.....	.....	1 to 14.28	4,700,000	<i>b</i> 115,000,000
21	Egypt	Gold.....	.....	1 to 15.68	6,800,000	<i>b</i> 120,000,000
22	Mexico	Silver.....	1 to 16½	.....	12,100,000	<i>b</i> 5,000,000
23	Central American States	Silver.....	1 to 15½	.....	5,600,000	<i>b</i> 500,000
24	South American States	Silver.....	1 to 15½	.....	36,000,000	<i>b</i> 40,000,000
25	Japan	Gold and silver.	1 to 16.18	.....	41,100,000	<i>c</i> 80,000,000
26	India	Gold and silver.	1 to 15	.....	296,000,000	.....
27	China.....	Silver.....	.....	.....	360,000,000	.....
28	Straits Settlements.....	Gold and silver.	.....	.....	3,800,000	.....
29	Canada	Gold.....	.....	1 to 14.28	4,800,000	<i>b</i> 14,000,000
30	Cuba	Gold and silver.	1 to 15½	.....	1,800,000	<i>b</i> 18,000,000
31	Haiti	Gold and silver.	1 to 15½	.....	1,000,000	<i>b</i> 3,000,000
32	Bulgaria.....	Gold and silver.	1 to 15½	1 to 14.38	4,300,000	<i>b</i> 800,000
	Total .....	.....	.....	.....	.....	4,086,800,000

a November 1, 1895; all other countries, January 1, 1895.

b Estimate, Bureau of the Mint.

MONETARY SYSTEMS AND APPROXIMATE STOCKS OF MONEY IN THE AGGREGATE AND PER CAPITA IN THE PRINCIPAL COUNTRIES OF THE WORLD.

paper money in the principal countries of the world has been compiled from the latest information to show approximately the stock of money in the world.]

Stock of silver.			Uncovered paper.	Per capita.				
Full tender.	Limited tender.	Total.		Gold.	Silver.	Paper.	Total.	
\$548,400,000	\$77,200,000	\$625,600,000	\$416,700,000	\$8.78	\$8.89	\$5.92	\$23.59	1
.....	b 115,000,000	115,000,000	c 113,400,000	14.91	2.96	2.91	20.78	2
b 430,000,000	c 57,900,000	487,900,000	c 32,100,000	22.19	12.94	.84	35.77	3
b 105,000,000	b 110,000,000	215,000,000	c 60,400,000	12.21	4.20	1.18	17.59	4
b 48,000,000	b 6,900,000	54,900,000	c 65,400,000	8.73	8.71	10.38	27.82	5
b c 21,400,000	b c 20,000,000	41,400,000	c 191,800,000	3.20	1.35	6.24	10.79	6
b 10,000,000	5,000,000	15,000,000	.....	4.97	5.00	.....	9.97	7
b 500,000	b 1,000,000	1,500,000	c 22,400,000	.23	.68	10.18	11.09	8
b 126,000,000	b 40,000,000	166,000,000	c 83,700,000	2.28	9.49	4.78	16.55	9
.....	b 24,800,000	24,800,000	c 55,100,000	7.45	4.86	10.80	23.11	10
.....	c 10,600,000	10,600,000	c 11,700,000	6.65	1.83	2.02	10.50	11
.....	c 1,900,000	1,900,000	b 3,800,000	1.30	.83	1.65	3.78	12
l 80,000,000	b 40,000,000	120,000,000	c 204,300,000	3.22	2.76	4.69	10.67	13
c 53,000,000	c 3,200,000	56,200,000	c 28,600,000	6.21	11.96	6.08	24.25	14
.....	b 2,000,000	2,000,000	c 3,800,000	3.75	1.00	1.90	6.65	15
.....	c 4,800,000	4,800,000	c 2,100,000	1.66	1.00	.43	3.10	16
.....	c 5,400,000	5,400,000	c 5,400,000	6.30	2.35	2.35	11.00	17
.....	b 48,000,000	48,000,000	c 539,000,000	3.80	.38	4.28	8.46	18
l 30,000,000	d 10,000,000	40,000,000	.....	2.27	1.82	.....	4.09	19
.....	b 7,000,000	7,000,000	.....	24.47	1.49	.....	25.96	20
.....	b 15,000,000	15,000,000	.....	17.65	2.20	.....	19.85	21
b 55,000,000	.....	55,000,000	b 2,000,000	.41	4.54	.....	4.95	22
c 12,000,000	.....	12,000,000	c 8,000,000	.09	2.14	1.43	3.66	23
l 30,000,000	.....	30,000,000	b 550,000,000	1.11	.83	15.28	17.22	24
c 68,000,000	c 16,300,000	84,300,000	.....	1.95	2.05	.....	4.00	25
b 950,000,000	.....	950,000,000	b 37,000,000	.....	3.21	.12	3.33	26
b 750,000,000	.....	750,000,000	.....	.....	2.08	.....	2.08	27
b 115,000,000	.....	115,000,000	.....	.....	3.26	.....	3.26	28
.....	b 5,000,000	5,000,000	b 29,000,000	2.92	1.04	6.04	10.00	29
b 1,500,000	.....	1,500,000	.....	10.00	.83	.....	10.83	30
b 2,100,000	b 800,000	2,900,000	c 4,200,000	3.00	2.90	4.20	10.10	31
b 3,400,000	3,400,000	6,800,000	.....	.18	1.58	.....	1.76	32
3,439,300,000	631,200,000	4,070,500,000	2,469,900,000	.....	.....	.....	.....

c Information furnished through United States representatives.
d Haupt.

COMMERCIAL RATIO OF SILVER TO GOLD.—The commercial ratio of silver to gold for each year from 1687 to 1894 is shown in the following table:

COMMERCIAL RATIO OF SILVER TO GOLD FOR EACH YEAR FROM 1687 TO 1894.

[From 1687 to 1832 the ratios are taken from Dr. Adolph Soetbeer's tables; from 1833 to 1878 from Pixley and Abell's tables; from 1879 to 1894 from daily cablegrams from London to the Bureau of the Mint.]

Year.	Ratio.	Year.	Ratio.	Year.	Ratio.	Year.	Ratio.	Year.	Ratio.	Year.	Ratio.
1687....	14.94	1722...	15.17	1757...	14.87	1792...	15.17	1827...	15.74	1862...	15.35
1688....	14.94	1723...	15.20	1758...	14.85	1793...	15.00	1828...	15.78	1863...	15.37
1689....	15.02	1724...	15.11	1759...	14.15	1794...	15.37	1829...	15.78	1864...	15.37
1690....	15.02	1725...	15.11	1760...	14.14	1795...	15.55	1830...	15.82	1865...	15.44
1691....	14.98	1726...	15.15	1761...	14.54	1796...	15.65	1831...	15.72	1866...	15.43
1692....	14.92	1727...	15.24	1762...	15.27	1797...	15.41	1832...	15.73	1867...	15.57
1693....	14.83	1728...	15.11	1763...	14.99	1798...	15.59	1833...	15.93	1868...	15.59
1694....	14.87	1729...	14.92	1764...	14.70	1799...	15.74	1834...	15.73	1869...	15.60
1695....	15.02	1730...	14.81	1765...	14.83	1800...	15.68	1835...	15.80	1870...	15.57
1696....	15.00	1731...	14.94	1766...	14.80	1801...	15.46	1836...	15.72	1871...	15.57
1697....	15.20	1732...	15.09	1767...	14.85	1802...	15.26	1837...	15.83	1872...	15.63
1698....	15.07	1733...	15.18	1768...	14.80	1803...	15.41	1838...	15.85	1873...	15.92
1699...	14.94	1734...	15.39	1769...	14.72	1804...	15.41	1839...	15.62	1874...	16.17
1700....	14.81	1735...	15.41	1770...	14.62	1805...	15.79	1840...	15.62	1875...	16.59
1701....	15.07	1736...	15.18	1771...	14.66	1806...	15.52	1841...	15.70	1876...	17.88
1702....	15.52	1737...	15.02	1772...	14.52	1807...	15.43	1842...	15.87	1877...	17.22
1703....	15.17	1738...	14.91	1773...	14.62	1808...	16.08	1843...	15.93	1878...	17.94
1704....	15.22	1739...	14.91	1774...	14.62	1809...	15.96	1844...	15.85	1879...	18.40
1705....	15.11	1740...	14.94	1775...	14.72	1810...	15.77	1845...	15.92	1880...	18.05
1706....	15.27	1741...	14.92	1776...	14.55	1811...	15.53	1846...	15.90	1881...	18.16
1707....	15.44	1742...	14.85	1777...	14.54	1812...	16.11	1847...	15.80	1882...	18.19
1708....	15.41	1743...	14.85	1778...	14.68	1813...	16.25	1848...	15.85	1883...	18.64
1709....	15.31	1744...	14.87	1779...	14.80	1814...	15.04	1849...	15.78	1884...	18.57
1710....	15.22	1745...	14.98	1780...	14.72	1815...	15.26	1850...	15.70	1885...	19.41
1711....	15.29	1746...	15.13	1781...	14.78	1816...	15.28	1851...	15.46	1886...	20.78
1712....	15.31	1747...	15.26	1782...	14.42	1817...	15.11	1852...	15.59	1887...	21.13
1713....	15.24	1748...	15.11	1783...	14.48	1818...	15.35	1853...	15.33	1888...	21.99
1714....	15.13	1749...	14.80	1784...	14.70	1819...	15.33	1854...	15.33	1889...	22.10
1715....	15.11	1750...	14.55	1785...	14.92	1820...	15.62	1855...	15.38	1890...	19.76
1716....	15.09	1751...	14.39	1786...	14.96	1821...	15.95	1856...	15.38	1891...	20.92
1717....	15.13	1752...	14.54	1787...	14.92	1822...	15.80	1857...	15.27	1892...	23.72
1718....	15.11	1753...	14.54	1788...	14.65	1823...	15.84	1858...	15.38	1893...	26.49
1719....	15.09	1754...	14.48	1789...	14.75	1824...	15.82	1859...	15.19	1894...	32.56
1720....	15.04	1755...	14.68	1790...	15.04	1825...	15.70	1860...	15.29		
1721....	15.05	1756...	14.94	1791...	15.05	1826...	15.76	1861...	15.50		

THE WEALTH AND RECEIPTS AND EXPENSES OF THE UNITED STATES.

BY WILLIAM M. STEUART.

Numerous methods of presenting the wealth of the country and the receipts and expenses of the Federal, State, and local governments have been used, each depending on the amount of detail desired and the particular features to be emphasized. The presentation here adopted is not designed to develop details, but to show at a glance the increase and decrease in the wealth of the country and in the receipts and expenses of the Government.

From the reports of the Eleventh Census it appears that the total true valuation of the real and personal property in the United States in 1890 amounted to \$65,037,091,197; the total value of the products of productive industry, which include manufactures, and farm, fishery, and mineral products for the same year, amounted to \$12,148,380,626. The total revenues collected during 1890 by the Federal, State, and local governments are reported at \$1,040,473,013 and the expenditures at \$915,954,055, the receipts exceeding the expenditures by \$124,518,958, of which amount the excess in the transactions of the Federal government, including postal service, amounted to \$108,936,066, leaving \$15,582,892 as a surplus arising from the financial transactions of the State and local governments. The total Federal, State, county or parish, municipal, and school district debts of the country, including the debts of irrigation districts in California and the fire districts of Massachusetts, amounted to \$2,027,170,546.

Complete statistics concerning the wealth, income, expenses, and indebtedness for the entire country are not available for any year except 1890. The data given in the accompanying tables show the total population at the different censuses from 1800 to 1890, inclusive, the wealth (namely, the true value (*a*) of real and personal property) and the value of manufactures, and farm, fishery, and mineral products as reported at the different censuses from 1850 to 1890, inclusive, also the total national debt, less the cash in the Treasury, at the close of the fiscal years 1860, 1870, 1880, and 1890. The figures showing the fiscal operations of the Federal government give the average annual receipts and expenses for the ten decades ending with each of the census years

a The true value is what would be deemed a fair selling price for the property, and is thus termed in distinction from the assessed valuation.

from 1800 to 1890, inclusive. The receipts and expenses of the Federal government include premiums and interest. The division of the expenses into ordinary and extraordinary is arbitrary, the intention being to group under the latter title a number of items of expense that may be considered as not forming a part of the ordinary, current, necessary expenses of the Government. The extraordinary expenses include amounts paid as pensions; for the support of the Indians; the improvement of rivers and harbors; the erection and repair of forts, arsenals, armories, custom-houses, court-houses, and post-offices; payments on interest and as premiums; also expenditures for the increase of the Navy since 1885.

The totals grouped under the respective heads enumerated are shown in the following tables:

POPULATION, WEALTH, VALUE OF PRODUCTS OF INDUSTRY, AND DEBT.

Census year.	Population.	Wealth.	Value of manu- factures, and farm, fishery, and mineral prod- ucts.	Total national debt less cash in Treasury at end of fiscal year.
1800.....	5, 308, 483	.....	.....	.....
1810.....	7, 239, 881	.....	.....	.....
1820.....	9, 633, 822	.....	.....	.....
1830.....	12, 866, 020	.....	.....	.....
1840.....	17, 069, 453	.....	.....	.....
1850.....	23, 191, 876	\$7, 135, 780, 228	<i>a</i> \$1, 029, 106, 798	.....
1860.....	31, 443, 321	16, 159, 616, 068	<i>a</i> 1, 898, 785, 768	\$59, 964, 402. 01
1870.....	38, 558, 371	30, 068, 518, 507	<i>b</i> 6, 843, 559, 616	2, 331, 169, 956. 21
1880.....	50, 155, 783	43, 642, 000, 000	<i>c</i> 7, 974, 097, 438	1, 919, 326, 747. 75
1890.....	62, 622, 250	65, 037, 091, 197	<i>d</i> 12, 148, 380, 626	890, 784, 370. 53

a Not including value of farm products.
b Value of farm products includes betterments and addition to stock.
c Certain duplications in statistics of manufactures as published have been eliminated.
d Not including certain manufacturing industries not fully enumerated at prior censuses.

AVERAGE ANNUAL RECEIPTS AND EXPENSES OF THE FEDERAL GOVERNMENT.

Decade ending—	Receipts.	Expenses (exclusive of payments on public debt).		
		Ordinary.	Extraordinary.	Total.
1800.....	\$6, 776, 891. 80	\$3, 944, 452. 40	\$2, 889, 380. 46	\$6, 833, 832. 86
1810.....	13, 056, 864. 78	4, 877, 316. 43	3, 982, 137. 23	8, 859, 453. 66
1820.....	21, 066, 958. 73	17, 406, 690. 57	6, 474, 175. 99	23, 880, 866. 56
1830.....	21, 923, 071. 60	9, 506, 394. 62	6, 652, 161. 93	16, 158, 556. 55
1840.....	30, 461, 109. 62	17, 266, 408. 59	7, 226, 801. 02	24, 493, 209. 61
1850.....	27, 117, 363. 77	26, 432, 418. 51	5, 884, 075. 60	32, 316, 494. 11
1860.....	60, 237, 254. 13	48, 964, 936. 88	11, 206, 918. 92	60, 171, 855. 80
1870.....	304, 100, 050. 83	418, 932, 409. 30	111, 781, 417. 79	530, 713, 827. 09
1880.....	312, 476, 778. 23	109, 531, 577. 51	159, 515, 686. 05	269, 047, 263. 56
1890.....	371, 204, 582. 21	117, 287, 583. 36	151, 124, 961. 91	268, 412, 545. 27

The values of the products of industry shown for 1850 and 1860 do not include some elements that enter into the values for subsequent years. This fact, combined with the improvement in statistical methods and the greater care bestowed on the enumeration at subsequent censuses, will not permit of the use of percentages based on these figures or on the total wealth as indicating the exact increase. The percentages given for the other items in the following tables are based on definitely ascertained totals and show actual conditions. War expenses and

various other conditions controlling the receipts, expenses. and debt of the Government, as well as the inflated value of currency in 1870 as compared with gold, and the relatively prosperous or depressed condition of business during the respective census years must also be considered in accepting the percentages given in the following tables :

PERCENTAGES OF INCREASE OF POPULATION, WEALTH, VALUE OF PRODUCTS OF INDUSTRY, AND DEBT.

Census year.	Popula- tion.	Wealth.	Value of manufac- tures, and farm, fish- ery, and mineral products.	Total na- tional debt, less cash in Treasury.	Census year.	Popula- tion.	Wealth.	Value of manufac- tures, and farm, fish- ery, and mineral products.	Total na- tional debt, less cash in Treasury.
1800					1850	35. 87			
1810	36. 38				1860	35. 58	126. 46	84. 51	
1820	33. 07				1870	22. 63	86. 07	260. 41	3, 787. 59
1830	33. 55				1880	30. 08	45. 14	16. 52	a 17. 67
1840	32. 67				1890	24. 86	49. 02	52. 35	a 53. 59

a Decrease.

PERCENTAGES OF INCREASE OF RECEIPTS AND EXPENSES OF THE FEDERAL GOVERNMENT.

Decade ending—	Average annual receipts.	Average annual expenses.			Decade ending—	Average annual receipts.	Average annual expenses.		
		Ordi- nary.	Extra- ordinary.	Total.			Ordi- nary.	Extra- ordinary.	Total.
1800					1850	a 10. 98	53. 09	a 18. 58	31. 94
1810	92. 67	23. 65	37. 82	29. 64	1860	122. 14	85. 25	90. 46	86. 20
1820	61. 35	256. 89	62. 58	169. 55	1870	404. 84	755. 58	897. 43	782. 00
1830	4. 06	a 45. 39	2. 75	a 32. 34	1880	2. 75	a 73. 85	42. 70	a 49. 30
1840	38. 95	81. 63	8. 64	51. 58	1890	18. 79	7. 08	a 5. 26	a . 24

a Decrease.

These tables, showing increases or decreases from decade to decade, when accompanied by the following tables, which show, per capita, the items given in the tables above, present in convenient summaries the available data pertaining to the growth of the country and the finan- cial operations of the Federal government during the past ninety years:

PER CAPITA WEALTH, VALUE OF PRODUCTS OF INDUSTRY, AND DEBT.

Census year.	Wealth.	Value of manufac- tures, and farm, fish- ery, and mineral products.	Total na- tional debt, less cash in Treasury.	Census year.	Wealth.	Value of manufac- tures, and farm, fish- ery, and mineral products.	Total na- tional debt, less cash in Treasury.
1800				1850	\$307. 68	\$44. 37	
1810				1860	513. 93	60. 39	\$1. 91
1820				1870	779. 82	177. 49	60. 46
1830				1880	870. 13	158. 99	38. 27
1840				1890	a 1,036. 01	193. 99	14. 22

a Not including the values for Indian Territory.

PER CAPITA RECEIPTS AND EXPENSES OF THE FEDERAL GOVERNMENT.

Decade ending—	Average annual receipts.	Average annual expenses.			Decade ending—	Average annual receipts.	Average annual expenses.		
		Ordinary.	Extraordinary.	Total.			Ordinary.	Extraordinary.	Total.
1800	\$1.28	\$0.74	\$0.55	\$1.29	1850	\$1.17	\$1.14	\$0.25	\$1.39
1810	1.80	.67	.55	1.22	1860	1.92	1.56	.35	1.91
1820	2.19	1.81	.67	2.48	1870	7.89	10.86	2.90	13.76
1830	1.70	.74	.52	1.26	1880	6.23	2.18	3.18	5.36
1840	1.78	1.01	.42	1.43	1890	5.93	1.87	2.41	4.28

While no extended explanation will be made of apparent inconsistencies in the above tables, attention is called to the tables showing percentages of increase. The large increases shown for 1870 are due principally to expenses of the civil war and the inflated value of currency as compared with gold. The largest percentages of increase during the decade ending with 1870 are shown for extraordinary expenses and the total debt less cash in the Treasury, the large increase in both these items being due primarily to war expenses. On the other hand, the amount of extraordinary expenses per capita, as shown by the last table, is the smallest per capita item shown for 1870, and is due to the comparatively small total of such expenses.

While, for the reasons given, the totals for wealth and values of products of industry can only be used in a general way for comparison, the totals for 1860 may be accepted as showing the conditions prevailing during the decade immediately preceding the civil war and those for 1890 as indicating the conditions that prevailed during a decade after the direct effects of the war had disappeared. The two totals therefore indicate normal conditions. Comparing the two years it appears that the total wealth per capita increased from \$513.93 to \$1,036.01, or 101.59 per cent, and the per capita value of the products of industry increased from \$60.39 to \$193.99, or 221.23 per cent, while the receipts per capita of the Government increased from \$1.92 to \$5.93, or 208.85 per cent, and the total expenses from \$1.91 to \$4.28, or 124.08 per cent. The actual increase per capita in expenses was \$2.37, of which increase the ordinary expenses constituted 31 cents, increasing 19.87 per cent, and the extraordinary \$2.06, increasing 588.57 per cent. One of the largest items of expense entering into the average total of extraordinary expenses for the decade ending with 1890 is pensions. Excluding this item the yearly average for the decade would be \$80,901,696.76, giving an extraordinary expense per capita of \$1.29, an increase over that of 1860 of 268.57 per cent.

While the tables giving the percentages of increase show that the total receipts and expenses of the Government have increased largely as was necessary to be in keeping with the development of the nation in all directions, the tables giving the per capita items show that the receipts and expenses have not increased abnormally when compared with the increase in wealth and industry. An increase is shown in per capita wealth and values of industry since 1870, while a varying decrease is shown in receipts and expenses, as well as in the national debt.

DECISIONS OF COURTS AFFECTING LABOR.

In Bulletin No. 1, issued in November, 1895, by the Department of Labor, it was stated in the introduction that one of the intended departments of information in each issue of the bulletin would consist in "the reproduction, immediately after their passage, of new laws that affect the interests of the working people whenever such are enacted by State legislatures or by Congress; also, the reproduction of the decisions of courts interpreting labor laws or passing upon any subject which involves the relations of employer and employee. Attention likewise will be called to any other matters pertaining to law which may be of concern and value to the industrial interests of the country, and which might not be obtained without expense or trouble from other sources."

In conformity with the above announcement, certain recent decisions rendered by the supreme courts of various States and the United States, passing upon the validity of labor laws or deciding cases arising under such laws or under the common law governing the relations of employers and employees, are here published. These decisions are not, as a rule, reproduced in full, their length and the space limitations of the bulletin preventing such a course; but when not given in full, their substance and the reasons upon which they are based are given in the language of the courts; in other words, they are quoted, when not fully reproduced, at sufficient length to give a full and clear understanding of the basis and scope of each opinion.

The decisions herein published are classed with reference to the character of the law under which they were rendered, those deciding cases which arose under legislative enactments being first presented, followed by such as determine cases under the common law.

DECISIONS UNDER STATUTORY LAW.

By act approved October 21, 1891, the legislature of the State of Georgia required certain corporations to give to their discharged employees or agents the causes of removal or discharge, the language of the act being as follows:

SECTION 1. Hereafter, when any railroad company, telegraph company, express company, or electric street railroad company shall discharge or remove any agent or employee, it shall be the duty of such company, when requested, in writing, by such discharged agent or

employee, to give a specific statement, in writing, setting forth the reason or reasons which have prompted, caused, or induced such discharge or removal, and if such discharge or removal has been prompted, caused, or induced, in whole or in part, by any complaint or communication made to such company, it shall be the duty of the company to inform the discharged agent or employee of the substance and nature of such communication or complaint, and when and by whom such complaint or communication was made.

SEC. 2. The written request provided for in the preceding section of this act, to be effective, must be signed by the discharged agent or employee, and be delivered, by an officer authorized to serve the process of citation of a court within this State, either to the president, secretary, or treasurer of such company, or to the local agent representing such company in any county within this State, or by leaving the same at the principal office of such company during office hours.

SEC. 3. Any company to whom has been delivered a written request, as provided for in the preceding section of this act, shall have twenty days from the date of the delivery thereof within which to give the information requested. The statement required by such company to be given to a discharged agent or employee may be delivered to such agent or employee by an officer authorized to serve the process of citation, or by leaving the same, addressed to such discharged agent or employee, with the county clerk of the county in which the written request was preferred. If such company shall fail or refuse to give the information as hereinbefore provided for, or shall give a false statement thereof, it shall be liable to such discharged agent or employee for damages in the sum of five thousand dollars.

One Wallace brought suit under this statute against the Georgia, Carolina and Northern Railway Company, to recover the sum of \$5,000, alleging that after the company, by contract made July 9, 1892, had employed him as its chief car inspector, and while he was performing his duties as such on August 12, 1892, the company discharged him. On August 18, 1892, he made a written request of the company to give him a specific statement in writing of the reasons which had caused his discharge, and, if the same had been induced in whole or in part by any communication made to the company, to inform him of the nature and substance of such communication or complaint, and when and by whom it was made. This written request was signed by him, and on the same day was served on the company by being delivered to the local agent of the company at its office in Fulton County by the sheriff of that county. Afterwards the plaintiff waited for more than twenty days, within which time the defendant should have delivered the written statement, as requested, to the plaintiff, or left it, addressed to him, with the county clerk; but the defendant failed and refused to give the information as requested, and as required by law, whereby it became liable to the plaintiff in the sum of \$5,000, etc.

The suit was dismissed by the city court of Atlanta, and the judgment of that court was affirmed by the supreme court of the State, June 18, 1894. Said decision, which declares the act in question to be unconstitutional, is published on page 579 of volume 22 of the South-

eastern Reporter, and the syllabus of the same, prepared by the court, is as follows:

The public, whether as many or one, whether as a multitude or a sovereignty, has no interest to be protected or promoted by a correspondence between discharged agents or employees and their late employers, designed not for public but for private information, as to the reasons for discharges and as to the import and authorship of all complaints or communications which produced or suggested them. A statute which undertakes to make it the duty of incorporated railroad, express, and telegraph companies to engage in correspondence of this sort with their discharged agents and employees, and which subjects them in each case to a heavy forfeiture under the name of damages for failing or refusing to do so, is violative of the general private right of silence enjoyed in this State by all persons, natural or artificial, from time immemorial, and is utterly void and of no effect. Liberty of speech and of writing is secured by the constitution, and incident thereto is the correlative liberty of silence, not less important nor less sacred. Statements or communications, oral or written, wanted for private information can not be coerced by mere legislative mandate at the will of one of the parties and against the will of the other. Compulsory private discovery, even from corporations, enforced not by suit or action but by statutory terror, is not allowable where rights are under the guardianship of due process of law.

It follows from the foregoing that the act of October 21, 1891, entitled "An act to require certain corporations to give their discharged employees or agents the causes of their removal or discharge when discharged or removed," is unconstitutional, and that an action founded thereon for the recovery of \$5,000 as penalty or arbitrary damages, fixed by the statute for noncompliance with its mandates, can not be supported.

By act approved June 17, 1893, the legislature of Illinois undertook "to regulate the manufacture of clothing, wearing apparel, and other articles in this State, and to provide for the appointment of State inspectors to enforce the same, and to make an appropriation therefor."

Upon the complaint of the factory inspector, appointed under this law, a warrant was issued by a justice of the peace of Cook County against William E. Ritchie for violating section 5 of the statute in question by employing a certain adult female, more than 18 years of age, at work in a factory more than eight hours on a certain day in February, 1894. The case was tried in the criminal court of Cook County, on appeal from the judgment of the justice of the peace, and the defendant was convicted and fined, whereupon the case was brought, on writ of error, before the supreme court of Illinois, which tribunal, on March 14, 1895, reversed the judgment of the criminal court and decided that section 5 of the act which declares that "no female shall be employed in any factory or workshop more than eight hours in any one day or forty-eight hours in any one week" is unconstitutional; the court also decided the first clause of section 10, which appropriated \$20,000 for the salaries of the factory inspectors, to be unconstitutional.

The decision in this case, which is published in full in volume 40 of the Northeastern Reporter, page 454, is followed in the case of *Tilt v.*

People, and in several other cases, all of which are named on page 462 of the volume referred to.

The substance of the decision in the Ritchie case, delivered by Judge Magruder, is as follows:

While some of the language of this act is broad enough to embrace within its terms the manufacture of all kinds of goods or products, other provisions of the act are limited to the manufacture of "coats, vests, trousers, knee pants, overalls, cloaks, skirts, ladies' waists, purses, feathers, artificial flowers, or cigars, or any wearing apparel of any kind whatsoever." The act is entitled "An act to regulate the manufacture of clothing, wearing apparel, and other articles," etc. If it be construed as applying only to manufacturers of clothing, wearing apparel, and articles of a similar nature, there appears to be no reasonable ground for prohibiting such manufacturers and their employees from contracting for more than eight hours in one day, while other manufacturers are not forbidden to so contract. If the act be construed as applying to manufacturers of all kinds of products there is no good reason why the prohibition should be directed against manufacturers and their employees, and not against merchants, or builders, or contractors, or carriers, or farmers, or persons engaged in other branches of industry and their employees. Women employed by manufacturers are forbidden by section 5 of the act in question to make contracts to labor longer than eight hours per day, while women employed as saleswomen in stores, or as domestic servants, bookkeepers, stenographers, typewriters, or in laundries, or other occupations not embraced under the head of manufacturing, are at liberty to contract for as many hours of labor per day as they choose. The manner in which this section discriminates against one class of employers and employees, and in favor of all others, renders it invalid.

But aside from its partial and discriminating character this enactment is a purely arbitrary restriction upon the fundamental right of the citizen to control his or her own time and faculties. It substitutes the judgment of the legislature for the judgment of the employer and employee in a matter about which they are competent to agree with each other. It assumes to dictate to what extent the capacity to labor may be exercised by the employee, and takes away the right of private judgment as to the amount and duration of the labor to be put forth in a specified period. Section 2 of article 2 of the constitution of Illinois provides that "no person shall be deprived of life, liberty, or property without due process of law." The privilege of contracting is both a liberty and property right—the right to use, buy, and sell property and to contract in respect thereto is protected by the constitution. Labor is property, and the laborer has the same right to sell his labor and to contract with reference thereto as has any other property owner. The legislature has no power to prevent persons who are sui juris from making their own contracts, nor can it interfere with the freedom of contract between the workman and the employer. The right to labor or employ labor, and make contracts in respect thereto upon such terms as may be agreed upon between the parties, is included in the constitutional guaranty above quoted. "Liberty" includes the right to make contracts as well with reference to the amount and duration of labor to be performed as concerning any other lawful matter. Hence, the right to make contracts is an inalienable one, and any attempt to unreasonably abridge it is opposed to the constitution.

The protection of property is one of the objects for which free governments are instituted among men. The right to acquire, possess, and protect property includes the right to make reasonable contracts; and when an owner is deprived of one of the attributes of property, like the right to make contracts, he is deprived of his property within the meaning of the constitution.

The right to contract is the only way by which a person can rightfully acquire property by his own labor. This right to contract, which is thus included in the fundamental rights of liberty and property, can not be taken away without "due process of law." The words "due process of law" have been held to be synonymous with the words "law of the land." The "law of the land" is general public law, binding upon all members of the community, under all circumstances, and not partial or private laws, affecting the rights of private individuals or classes of individuals. The legislature has no right to deprive one class of persons of privileges allowed to other persons under like conditions. If one man is denied the right to contract as he has hitherto done under the law, and as others are still allowed to do by the law, he is deprived of both liberty and property to the extent to which he is thus deprived of the right. Applying these principles to the consideration of section 5 we are led irresistibly to the conclusion that it is an unconstitutional and void enactment.

It is claimed that this section can be sustained as an exercise of the police power of the State. The police power of the State is that power which enables it to promote the health, comfort, safety, and welfare of society. It is very broad and far-reaching, but is not without its limitations. Legislative acts passed in pursuance of it must not be in conflict with the constitution, and must have some relation to the ends sought to be accomplished; that is to say, to the comfort, welfare, or safety of society. When the ostensible object of an enactment is to secure the public comfort, welfare, or safety it must appear to be adapted to that end. There is nothing in the title of the act of 1893 to indicate that it is a sanitary measure. There is nothing in the nature of the employment contemplated by the act which is in itself unhealthy or unlawful or injurious to the public morals or welfare. It is not the nature of things done, but the sex of the persons doing them, which is made the basis of the claim that the act is a measure for the promotion of the public health. It is sought to sustain the act as an exercise of the police power upon the alleged ground that it is designed to protect woman on account of her sex and physique. But inasmuch as sex is no bar under the constitution and law to the endowment of woman with the fundamental and inalienable rights of liberty and property, which includes the right to make her own contracts, the mere fact of sex will not justify the legislature in putting forth the police power of the State for the purpose of limiting her exercise of those rights, unless the courts are able to see that there is some fair, just, and reasonable connection between such limitation and the public health, safety, or welfare proposed to be secured by it.

We can not more appropriately close the discussion of this branch of the case than by quoting and adopting as our own the following words of the New York court of appeals in *re Jacobs* (98 N. Y., 98): "When a health law is challenged in the courts as unconstitutional, on the ground that it arbitrarily interferes with personal liberty and private property, without due process of law, the courts must be able to see that it has at least in fact some relation to the public health, that the public health is the end actually aimed at, and that it is appropri-

ate and adapted to that end. This we have not been able to see in this law, and we must, therefore, pronounce it unconstitutional and void."

The first clause of section 10 of said act, which appropriates \$20,000 for the salaries of the inspectors, is unconstitutional for the reason that it is not germane to the subject expressed in the title, and also for the reason that it is in violation of section 16 of article 4 of the constitution, which provides that no bill making appropriations for the salaries of government officials shall contain a provision on any other subject.

The legislature of the State of Missouri, by act approved March 6, 1893, made it unlawful for an employer to prohibit an employee from joining any labor or trade union, or other lawful organization or society, or to require an employee to withdraw therefrom.

Under this act George Julow, who had discharged an employee, not hired for a definite term, because he would not withdraw from a lawful organization, was convicted in the St. Louis court of criminal correction and fined \$50. He appealed to the supreme court of the State, which reversed the judgment of the lower tribunal, by decision of June 18, 1895, and declared the law under which he was convicted to be unconstitutional. The substance of the decision of the supreme court, delivered by Judge Sherwood, which is published in full in the thirty-first volume of the Southwestern Reporter, page 781, is as follows:

The act of March 6, 1893, in making it unlawful for an employer to prohibit an employee from joining or to require an employee to withdraw from a trade or labor union or other lawful organization, violates the fifth amendment to the Constitution of the United States, and article 2, section 30, of the constitution of the State, which provide that no person shall be deprived of life, liberty, or property without due process of law. These terms, "life," "liberty," and "property," are representative terms, and cover every right to which a member of the body politic is entitled under the law, and all our liberties, personal, civil, and political—in short, all that makes life worth living—and of none of these rights or liberties can anyone be deprived except by due process of law.

Each of the rights heretofore mentioned carries with it, as its natural and necessary coincident, all that effectuates and renders complete the full, unrestrained enjoyment of that right.

Take, for instance, that of property. Necessarily blended with that right are those of acquiring property by labor, by contract, and also of terminating that contract at pleasure. In the case at bar the contract was not made for any definite period. From these premises it follows that depriving an owner of property of one of its essential attributes is depriving him of his property within the constitutional provision. Here the law under review declares that to be a crime which consists alone in the exercise of a constitutional right, to wit, that of terminating a contract, one of the essential attributes of property, indeed property itself. If an owner, etc., obeys the law on which this prosecution rests, he is thereby deprived of a right and a liberty to contract or terminate a contract, as all others may; if he disobeys it, then he is punished for the performance of an act wholly innocent, unless, indeed, the doing of such act, guaranteed by the organic law, the exercise of a right of which the legislature is forbidden to deprive him, can by that body be conclusively pronounced criminal.

We deny the power of the legislature to do this, and consequently we hold that the statute which professes to exert such a power is nothing more or less than a "legislative judgment," and an attempt to deprive all who are included within its terms of a constitutional right without due process of law. But the statute is also obnoxious to criticism on other grounds. It does not relate to persons or things as a class—to all workmen, etc.—but only to those who belong to some "lawful organization or society," referring to a trade union, labor union, etc. Where a statute does this it is a special, as contradistinguished from a general law. Here a nontrades-union or a nonlabor-union man could be discharged without ceremony, without let or hindrance, whenever the employer so desired, with or without reason therefor, while in the case of a trades-union or labor-union man he could not be discharged if such discharge rested on the ground of his being a member of such an organization. In other words, the legislature have undertaken to limit the power of the owner or employer as to his right of contract with particular persons of a class; the statute which does this is a special, not a general law, and therefore is in violation of the State constitution.

The statute is also in conflict with section 1, article 14, of the Constitution of the United States, forbidding that "any State deprive any person of life, liberty, or property without due process of law."

Nor can the statute escape censure by assuming the label of a "police regulation." It has none of the elements or attributes which pertain to such a regulation, for it does not, in terms or by implication, promote or tend to promote the public health, welfare, comfort, or safety; and if it did, the State would not be allowed, under the guise and pretense of a police regulation, to encroach or trample upon any of the just rights of the citizen, which the Constitution intended to secure against diminution or abridgment.

In an action by Thomas Durkin against the Kingston Coal Company and William Jones, damages were recovered in the court of common pleas, Luzerne County, Pa., by the plaintiff for injuries received while he was an employee in the coal mine of which the defendant company was owner and defendant Jones was certified foreman, through the negligence of the foreman. The defendants appealed, and the supreme court of Pennsylvania, on October 7, 1895, reversed the judgment as to the coal company, holding that the act of 1891, of Pennsylvania, relating to anthracite coal mines (P. L., p. 176) is unconstitutional and void in so far as it makes the owner of such mine liable for injuries to other employees occasioned by the negligence of a mine foreman, licensed, certified, and employed under the requirements of the statute. The judgment was, however, affirmed as to Jones, the mine foreman, who was held to be liable, independently of, as well as under, the statute, for injury to an employee due to his want of attention to his proper duties.

The decision in this case, delivered by Judge Williams, is published in volume 33 of the Atlantic Reporter, page 237, and so much thereof as bears on the constitutionality of the law in question, and on the responsibility of the mine foreman, is given here:

The first article of the constitution of this State, known as the "bill of rights," declares that all men are possessed of certain inherent and

inalienable rights. One of these is the right to acquire, possess, and protect property. The preservation of this right requires, both that every man should be answerable for his own acts and engagements, and that no man should be required to answer for the acts and engagements of strangers over whom he has no control. A statute that should impose such a liability, or that should take the property of one person and give it to another or to the public without making just compensation therefor, would violate the bill of rights, and would be, for that reason, unconstitutional and void.

It is in furtherance of the right to acquire, possess, and protect property that section 17 of the bill of rights prohibits the enactment of laws that shall interfere with or impair the obligation of contracts. The tendency toward class legislation for the protection of particular sorts of labor has been so strong, however, that several statutes have recently been passed that could not be sustained under the provisions of the bill of rights. Such was the case in *Godcharles v. Wigeman* (113 Pa. St., 431 ; 6 Atl., 354); such was the case with some recent provisions relating to mechanics' liens, and such is alleged by the appellants to be the case with some of the provisions of the act of 1891, under which this action was brought. The title of the act of 1891 is "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania and for the protection and preservation of property connected therewith." It divides the anthracite region into eight districts, and provides for the appointment by the governor of a competent mine inspector in each district, who shall have a general oversight of mining operations within his district. It creates an examining board for each district, with power to examine candidates, and recommend such as they shall deem qualified for the position of mine foreman to the secretary of internal affairs. It is made the duty of this officer to issue certificates to those who apply therefor and have been recommended by the board of examiners.

Article 8, section 1, declares that no person "shall be permitted to act as mine foreman or assistant mine foreman of any coal mines or colliery" who has not been examined by the board of examiners, recommended to the secretary of internal affairs, and provided by that officer with a certificate. The employment of a certified mine foreman is made obligatory upon all mine owners and operators, and a failure to do so is punished by a fine of \$20 per day, which may be collected from the owner, the operator, or the superintendent in charge of the mine. The duties of the mine foreman are prescribed by the act, and the owner or operator of the mine can not interfere with them. He is especially to "visit and examine every working place in the mine at least once every alternate day while the men of such place are or should be at work, and direct that each and every working place is properly secured by props or timber, and that safety in all respects is assured by directing that all loose coal or rock shall be pulled down or secured, and that no person shall be permitted to work in an unsafe place unless it be for the purpose of making it secure." (Article 12, rule 12.)

The mine foreman is also required to examine, at least once every day, "all slopes, shafts, main roads, ways, signal apparatus, pulleys, and timbering, and see that they are in safe and efficient working condition." (Rule 13.)

After having thus most effectually taken the management of his mining operations out of his hands, and committed it to officers of its own creation, whose employment is made compulsory upon him, the statute, in section 8 of article 17, imposes upon the mine owner a lia-

bility for the neglect or incompetency of the men whom he is compelled to employ, in these words: "That for any injury to person or property occasioned by any violation of this act or any failure to comply with its provisions by any mine foreman, a right of action shall accrue to the party injured against said owner or operator for any direct damages he may have sustained thereby; and in case of loss of life by reason of such neglect or failure aforesaid a right of action shall accrue to the widow and lineal heirs of the person whose life shall be lost for like recovery of damages for the injury they shall have sustained."

This statute, regarded as a whole, is an extraordinary piece of legislation. Through it, the lawmakers say to the mine owner: "You can not be trusted to manage your own business. Left to yourself, you will not properly care for your own employees. We will determine what you shall do. In order to make it certain that our directions are obeyed, we will set a mine foreman over your mines, with authority to direct the manner in which your operations shall be conducted, and what precautions shall be taken for the safety of your employees. You shall take for this position a man whom we certify to as competent. You shall pay him his salary. What he orders done in your mines you shall pay for. If, notwithstanding our certificate, he turns out to be incompetent or untrustworthy, you shall be responsible for his ignorance or negligence." Under the operation of this statute the mine foreman represents the Commonwealth. The State insists on his employment by the mine owner, and, in the name of the police power, turns over to him the determination of all questions relating to the comfort and the security of the miners, and invests him with the power to compel compliance with his directions. Incredible as it may seem, obedience on the part of the mine owner does not protect him; but, if the mine foreman fails to do properly what the statute directs him to do, the mine owner is declared to be responsible for all the consequences of the incompetency of the representative of the State. This is a strong case of binding the consequences of the fault or folly of one man upon the shoulders of another. This is worse than taxation without representation. It is civil responsibility without blame, and for the fault of another. The same conclusion may be reached by another road.

It has been long settled that a mining boss or foreman is a fellow-servant with the other employees of the same master, engaged in a common business, and that the master is not liable for an injury caused by the negligence of such mining boss. The duty of the mine owner is to employ competent bosses or foremen to direct his operations. When he does this he discharges the full measure of his duty to his employees, and he is not liable for an injury arising from the negligence of the foreman. A vice-principal is one to whom an employer delegates the performance of duties which the law imposes on him, and the employer is responsible because the duty is his own. As to the acts of workmen, and the manner in which they do their work, the duty of the employer is to employ persons who are reasonably competent to do the work assigned them, and, if he finds himself mistaken in regard to their competency, to discharge them when the mistake is discovered. But he is not responsible for the consequences of their negligence as these may affect each other. Now, the act of 1891 undertakes to reverse the settled law upon this subject, and declares that the employer shall be responsible for an injury to an employee resulting from the negligence of a fellow-workman. Prior to the act of 1891, the man whose negligence caused the injury was alone liable to respond in damages. He might not always have property out of which a judgment could be

collected, but the plaintiff must, in any case, take his chances of the solvency of the defendant against whom his cause of action lies.

The act of 1891 undertakes to furnish a responsible defendant for the injured person to pursue. Passing over the head of the fellow-servant at whose hands the injury was received, it fastens on the owner of the property on which the accident happened, and declares him to be the guilty person on whose head the consequences of the accident shall fall. To see the true character of this legislation we must keep both lines of objection in mind. We must remember that the injury complained of is due to the negligence of a fellow-workman, for which the master is responsible neither in law nor morals. We must also remember that this fellow-workman has been designated by the State, his duties defined, and his powers conferred by statute, and his employment made compulsory, under heavy penalties, by the same statute. Finally, we must remember that it is the negligence of this fellow-servant, whose competency the State has certified, and whose employment the State has compelled, for which the employer is made liable. The State says: "He is competent. You must employ him. You shall surrender to his control the arrangements for the security of your employees." It then says, in effect: "If we impose upon you by certifying to the competency of an incompetent man, or if the man to whom we commit the conduct of your mines neglects his duty you shall pay for our mistake and for his negligence." We have no doubt that so much, at least, of section 8 of article 17 of the act of 1891 as imposes liability on the mine owner for the failure of the foreman to comply with the provisions of the act which compels his employment and defines his duties, is unconstitutional and void.

But why should the certified mine foreman be relieved from the consequences of his negligence? The jury have found that the injury was due to his want of attention to his proper duties, and his liability is clear, without regard to our mining laws. But the statute required him to examine the roads and ways in use in the mine each day. He knew the film of rock separating the upper from the lower working was but 8 feet thick, at best; he knew that the supports for this film were not in line with each other in the upper and lower workings; he knew that layers of the rock were falling off, that the thickness of the floor was reduced under the way on which the accident occurred to about 5 feet, and that, not far away, it had fallen down into the lower working; yet, with all this knowledge he did nothing, so far as we can learn, to increase the security of the way. Whether his conduct be considered with reference to the statute, or regardless of it, his failure to do what he must have known to be necessary was a neglect of duty such as should render him liable to his fellow servant who has suffered from it. We are not prepared to hold the act of 1891 unconstitutional as a whole. It relates to all anthracite coal mines, and defines what shall be regarded as such mines. Coal may be taken out of the ground by farm owners for their own use, or it may be taken in such small quantities and for such local purposes as to make the application of the mining laws to the operations so conducted not only unnecessary, but burdensome to the extent of absolute prohibition. Such limited or incipient operations are not within the mischief, to remedy which the mining laws were devised. They are ordinarily conducted for the purposes of exploration, or for family supply, and ought not to be classed with operations conducted for the supply of the public. The business of coal mining, like that of insurance or banking, may be defined by the legislature. The definition found in the act of 1891 seems to us reason-

able, to be within the fair limits of a legislative definition, and to exclude only such operations as are too small to make the general regulations provided by the act applicable to them. The ground on which we place our judgment is not, therefore, that the act is local, but that the provisions of it which we have considered are in violation of the bill of rights.

Section 1 of chapter 270 of the acts of 1887 of Massachusetts provides that where personal injury is caused to an employee, who is himself in the exercise of due care and diligence at the time, by reason of the negligence of any person in the service of the employer, entrusted with and exercising superintendence, whose sole or principal duty is that of superintendence, the employee shall have the same right of compensation and remedies against the employer as if the employee had not been an employee of nor in the service of the employer, nor engaged in its work.

Under this act Norman J. Dane sued the Cochran Chemical Company for personal injuries as an employee, the circumstances of his employment having been as follows: The company employed Frederick Johnson, a carpenter, under a continuing contract to make all repairs and alterations required in its works, he to furnish tools and the company the materials, at \$2.50 per day for his own services, and 25 cents per day for each man employed by Johnson in addition to the amount of wages which Johnson agreed to pay the man. He hired, paid, superintended, and discharged the men employed by him, but the company directed how the work was to be done. Dane was hired by Johnson, and in the course of his employment received the injuries for which he sought compensation.

The case was decided adversely to Dane by the superior court of Suffolk County, Mass., and having been brought before the supreme judicial court of Massachusetts on exceptions by the plaintiff, the latter tribunal, on October 19, 1895, overruled the exceptions and sustained the decision of the superior court, holding that Dane, having been hired by the carpenter, was an employee of the carpenter and not of the company, and hence could not recover damages for his injuries from the company.

The decision of the supreme judicial court in this case, delivered by Chief Justice Field, is published in full in volume 41 of the *Northeastern Reporter*, page 678, and is based on the following reasoning:

The fundamental question in the present case is whether the relation between the plaintiff and defendant, as shown by the evidence, was that of employer and employee. Could the plaintiff have recovered his wages of the defendant if they had not been paid by Johnson? Did Johnson hire the plaintiff on his own account or as agent for the defendant? At common law the defendant, on the evidence, would not be liable to the plaintiff, because, if Johnson was a servant of the defendant in hiring the plaintiff and the other workmen, then the plaintiff and Johnson were servants of the defendant, and a master is

not liable, at common law, for the injury to one servant occasioned by the negligence of his fellow servants; and if Johnson was an independent contractor, and Dane was his servant, then the defendant would not be liable for any injury occasioned by the negligence of Johnson or of one of his servants to another of his servants. We are of opinion that the only reasonable inference to be drawn from the evidence in the exceptions is that the plaintiff was an employee of Johnson, and not of the defendant, within the meaning of the statute of 1887, chapter 270, and the amendments thereto.

It does not appear that Johnson was authorized to hire workmen on account of the defendant, or that the workmen hired by Johnson ever understood that they were to be paid by the defendant, or that the defendant or Johnson so understood. The fact that the defendant retained the right to decide how work should be done on its premises does not of itself make the workmen employed by Johnson employees of the defendant. Apparently Johnson employed whom he pleased, and directed the men employed by him in the performance of their work, whether upon the premises of the defendant or upon other premises where he might be doing work. On the evidence we do not think that the jury could properly find that the relation of employee and employer existed between the parties. If the relation of employer and employee did not exist between the parties, then the action can not be maintained under the statute of 1887, chapter 270.

A suit for damages was brought by William A. Perry against the Old Colony Railroad Company to recover damages for injuries received while making repairs on a locomotive engine in a roundhouse, through the alleged negligence of one Straw, an engineer claimed to have been in charge of the locomotive, in blowing down the engine.

He recovered in the superior court of Suffolk County, Mass., under chapter 270 of the acts of 1887 of Massachusetts, section 1 of which provides that where personal injury is caused to an employee, who is himself in the exercise of due care and diligence at the time, by reason of the negligence of any person in the service of the employer who has the charge or control of any signal, switch, locomotive engine, in train upon a railroad, the employee shall have the same right of compensation and remedies against the employer as if the employee had not been an employee of nor in the service of the employer, nor engaged or its work. The railroad company carried the case, on exceptions, to the supreme judicial court of the State, and that tribunal, on September 14, 1895, sustained the exceptions, holding that the case was not within the purview of the statute above quoted. The decision, delivered by Judge Morton, is published in volume 41 of the *Northeastern Reporter*, page 289, and so much thereof as bears on the applicability of the statute to the case is given here:

Even if Straw was negligent in blowing down, which we do not decide, we do not think he had charge or control of a locomotive upon a railroad track, within the meaning of the act. The statute, as it is said in *Thyng v. Fitchburg R. R. Co.* (156 Mass., 18; 13 N. E., 169),

“seems chiefly to contemplate the damages from a locomotive engine or train as a moving body, and to provide against the negligence of those who, either wholly or in part, control its movements.” This engine was stalled in the roundhouse for repairs, and was not “upon a railroad track,” as those words are ordinarily used. The case would be different, perhaps, if it had been standing on a track waiting to be coupled to a train or for some temporary purpose. If the engine had been in the repair shop, no one, we think, would contend that it was upon a railroad track, within the fair meaning of the act. The fact that it was in the roundhouse, instead, where such repairs were made as could be made comfortably, does not, it seems to us, make any difference. It is also a matter of great doubt whether the engine was in the charge or control of Straw. The testimony tended to show that when an engine came into the roundhouse it was generally assigned to a pit, the tender brake set up, and the wheels blocked, and then the engineer went off and the engine was in charge of the train dispatcher, or, as the plaintiff put it, “the engineer had no duties in the roundhouse any more than if he has a little job on his engine to do, he does it,” which is far from saying that in the roundhouse he has charge and control of the engine. The blowing down of the engine was in response to an outside suggestion, and might as well have been done by anyone else, for aught that appears. But even if the engine was in charge or control of Straw, that is not sufficient. In order to make the defendant liable, it must also have been upon a railroad track, which we do not think it was.

On November 21, 1894, W. H. Clune, a local officer of the American Railway Union, was convicted, with others, in the United States district court for the southern district of California, of conspiracy to obstruct the passage of the United States mails during the time of the great railway strike in the summer of 1894. Motions for a new trial and in arrest of judgment were overruled, and the defendants were each sentenced to pay a fine of \$1 and to be imprisoned in the county jail of Los Angeles County, Cal., for the period of eighteen months. The case was brought before the Supreme Court of the United States on writ of error, which court sustained the conviction by decision of November 15, 1895, as published in volume 16 of the Supreme Court Reporter, page 125.

The principal question of law in the case was raised in the argument, and related to the competency of Congress to impose a heavier penalty for conspiracy to commit a crime than that imposed for the crime itself. On this point Mr. Justice Brewer, in delivering the opinion of the court, said:

By section 3995, Revised Statutes United States, the offense of obstructing the passage of the mails is made punishable by a fine of not more than \$100. By section 5440, Revised Statutes United States, a conspiracy to commit any offense against the United States is punishable by a fine of not less than \$1,000 nor more than \$10,000, and by imprisonment for not more than two years. Upon this he (the counsel for the defendants) contended that a conspiracy to commit an offense

can not be punished more severely than the offense itself, and also that when the principal offense itself is, in fact, committed, the mere conspiracy is merged in it.

The language of the section is plain and not open to doubt. A conspiracy to commit an offense is denounced as itself a separate offense, and the punishment thereof is fixed by the statute, and we know of no lack of power in Congress to thus deal with a conspiracy. Whatever may be thought of the wisdom or propriety of a statute making a conspiracy to do an act punishable more severely than the doing of the act itself, it is a matter to be considered solely by the legislative body. The power exists to separate the conspiracy from the act itself and to affix distinct and independent penalties to each.

With regard to the suggestion that the conspiracy was merged in the completed act, it is enough that we can not, upon the record, hold that the mails were obstructed. All the testimony not being preserved, it may be that the testimony satisfied the jury that there was, in fact, no obstruction of the mails, but only, as charged, a conspiracy to obstruct. If so, the suggestion of a merger falls to the ground.

DECISIONS UNDER COMMON LAW.

The supreme court of Indiana on October 16, 1895, reversed the judgment of the circuit court of Sullivan County in the case of Margaret C. Tohill *v.* Evansville and Terre Haute Railroad Company, and decided that the plaintiff was not entitled to recover damages from the railroad company for the death of her husband, who was killed while in the performance of his duty as an engineer in the employ of the company in a collision between his train, No. 20, which was run as a "regular," and another train, No. 19, which was being run as an "extra," or inferior train.

The supreme court held that the proximate cause of the collision was not in ordering the running of the extra train and failing to notify the deceased engineer of the regular train of the fact, but was the failure of the deceased engineer's fellow-servants in charge of the extra train to comply with the company's rules, by keeping out of the way of the regular train, and hence that the railroad company was not responsible for the accident.

The substance of the decision, delivered by Judge Hackney, which is published in full in volume 41 of the *Northeastern Reporter*, page 709, is as follows:

We think it may be conceded to be the law that a railroad company, operating a complicated system of trains, is required to provide for the reasonable safety of the operatives of such trains against collisions; that it would not be a compliance with such requirement to direct one train to run by schedule and another to run over the same track without schedule, in conflict with such schedule train and without notice to the schedule trainmen, by rule or otherwise, or without some limitation upon the extra or nonscheduled train, under which it would so run as to guard against collision with the schedule train. There are many authorities to the proposition that it is the duty of a railroad company to use ordinary care and prudence in making and promulgating

reasonably necessary and sufficient rules for the safe running of its trains and for the government of its employees, so as to furnish them a reasonable degree of safety, taking into consideration the nature of the service. But this requirement does not deny the right of railway companies to vary from the time tables in any instance, nor does it mean that every variation involves negligence on the part of the company. From the very nature of the business of carrying on an extensive railway system, trains must be expected to run out of schedule time, some from unavoidable delays and others as extra trains carrying an accumulation of freight and passengers beyond the line of business ordinarily expected and regularly prepared for. As said in the case of *Slater v. Jewett* (85 N. Y., 61), "it is at times a necessity to do so, and a necessity so frequent as to fall within the occurrences that a railway servant is bound to expect in the course of his employment. Even as regards the public and passengers, a railway manager has a right, when needs press, to vary from his general time-table. All that can then be required from him by the public and passengers is that, when he makes a variation, he act under it with reasonable care and diligence."

This is all that a servant could ask or expect. If, therefore, in the present case, the company made and promulgated such rules as, by their faithful observance, secured reasonable safety to operatives of schedule trains against collision with extra trains, the company must be held to have performed its duty in this respect. The special verdict in this case expressly found that the company maintained rules under which regular trains might be converted into extra trains; that trains of an inferior class should clear the right of way for trains of a superior class by taking a side track at least five minutes before the arrival of any schedule train at the last station to which it was safe for such inferior train to run; that No. 19 [the extra train] wholly failed to act in accordance with said rules, and did not take the side track at Pursell, where No. 20 [the regular train] could have passed in safety, but continued beyond said station to where the collision occurred. Thus it appears that obedience to said rules by No. 19 [the extra train] would have made the passage of No. 20 [the regular train], running by the schedule, entirely safe. A rule easily followed by servants, and when followed securing safety to co-servants, is a reasonable compliance with the duty owing by the master to his servants upon this question. As held in *Rose v. Railway Company* (58 N. Y., 217), obedience to the regulations of a railway company in regard to the running of trains is a matter of executive detail, which neither the corporation nor any general agent can personally oversee, but as to which employees must be relied on. If those employees fail in their duty by breaking existing regulations, and in consequence other employees are injured, no action can be maintained for the injury, as it will be deemed to have been caused by the negligence of a fellow-servant.

As we have seen, the negligence of those in charge of No. 19 [the extra train] was the proximate cause of the collision, and the order of the train dispatcher was not negligently issued. That the operatives of No. 19 [the extra train] were the fellow-servants of the unfortunate engineer is not questioned by the appellee's counsel, but is conceded.

That injury resulting from the negligent act of a fellow-servant creates no liability against the master is not only well settled, but is conceded also by appellee's counsel. It was error, therefore, to deny the appellant's motion for judgment upon the special verdict. The judgment is reversed.

The supreme court of Michigan decided on October 22, 1895, in the case of *Shackleton v. Manistee and Northeastern Railroad Company* (reported in volume 64 of the *Northwestern Reporter*, page 728) that, under the conditions of the case, the railroad company was not answerable for the death of an employee who, while in the discharge of his duty, was thrown from a way car and killed, by reason of the absence of a hand railing, which had been removed from the car. The circumstances of the case are set forth in the opinion of the court, delivered by Judge Montgomery, which is as follows:

The plaintiff, as administratrix, sues to recover damages for the death of her husband, alleged to have been caused by the defendant's negligence. The deceased was a conductor on a freight train of the defendant company, and the injuries resulting in his death were caused by his being thrown off the rear end of the way car to the track and the train passing over him. The car from which he was thrown had hand rails provided on either side of the steps, the rear hand rail extending to the brake, so that a sudden lurch of the car would not result in throwing one attempting to alight from the car. On the occasion in question, however, this rear hand rail had been removed, and the testimony offered by the plaintiff tends to show that while deceased was stepping down from the car he was thrown off by reason of this defect. There is no room for attributing any negligence to the defendant, unless it be for the absence of the hand rail at this time. A few days before the accident deceased and his trainmen, when using the way car in question, allowed it to run against a car loaded with logs, which extended over the ends of the car on which they were loaded, so that, coming in contact with the hand rail, they bent it nearly against the side of the car. Deceased thereupon called the attention of a workman in the defendant's repair shops to the hand rail, and asked him to take it off and repair it. The workman replied "All right," and took it off. Deceased then started off with the car, without reporting the defect to the superintendent, as required by the rules of the company, and without making any objection to using the defective car to those in authority, or to anyone connected with the defendant in any way. While on his trip that day the assistant superintendent saw the car and said to the deceased, "You want to see that that is fixed. Get it fixed." Deceased again called the attention of the workman in the repair shop to it, and he again promised to fix it, but neglected to do so. Deceased, however, continued in the use of the car without protest, until he was killed in the manner above described.

The plaintiff's counsel recognize the general rule that the servant who engages in the use of, or continues in the use of, defective machinery or appliances, assumes the risk incident to the employment—but seeks to bring this case within the exception to the rule which obtains in case the servant has been induced to continue the use of the defective appliances by reason of the master's promise to repair. The present case is not within any such exception to the rule. No one representing the master had induced deceased to continue in the use of the car in its then condition. The employee in the car-repair shop certainly gave deceased no such directions. On the contrary, he was acting under instructions received from the deceased. The statement of the assistant superintendent, so far from being authority to continue the use of the car, was more in the nature of a rebuke for using it in its then condition. The most that can be said is that the company might have been

negligent in not repairing the car sooner, but such negligence was open to the observation of the deceased, and he saw fit to continue in the use of the car. He made no objection to using it in its crippled condition; he gave no notice to anyone in authority which would indicate to defendant that he refused to take the risk, which was as apparent to him as to anyone connected with the road. The circuit judge was right in directing a verdict for the defendant.

A question of great interest, and one which has rarely been judicially passed upon, recently arose in the case of *William Mattison v. The Lake Shore and Michigan Southern Railway Company*, before the court of common pleas of Lucas County, Ohio.

The case involved the right of a discharged employee, who had been blacklisted by his former employer, to recover pecuniary damages for the injury suffered by him by reason of the blacklisting.

The facts in the case were substantially as follows: Mattison had been employed by the railway company as a conductor, at wages of \$120 per month, and he declared in his petition that, having been appointed as a representative of other workmen, he made objection to certain rules adopted by the defendant company and "by all other trunk-line railroads in the United States," designated as "blacklist rules." Shortly after having made such objection, he was discharged from the service of the company, "without cause or provocation," and the company thereupon, conspiring with other railroad companies in order to prevent him from securing employment in his chosen avocation, caused the said blacklist rules to be enforced against him, thus preventing him from obtaining such employment. He was compelled to seek work elsewhere, and secured employment as a policeman, but as such had only been able to earn \$720 per year, instead of \$1,440 per year, which he had received as a railroad conductor.

The company demurred to Mattison's complaint, and the question arose as to whether the blacklist, resulting in injury to an innocent discharged employee, is a wrong for which such employee can obtain financial redress.

Judge Pratt, on September 25, 1895, sustained the right of Mattison to sue the company for damages. The report of the case, furnished the Department of Labor by the official stenographer of the court, shows the substance of the opinion to be as follows:

The employee's right to employment is equally sacred with the right of the employer to employ him; it is not only a serious right, affecting a man's life, but you may say that it is his life. The laboring man's employment is the only thing that stands between him and starvation, or what is little less than starvation—pauperism—and it is for the public interest and for the public good that the right of a man to his own employment, in any honest work which he may seek, should not be interfered with or violated.

This, of course, does not meddle at all with the right of a company, or of a man, to judge himself who he will have to work for him; and it makes no difference whether he refuses to let a man work for him because he is incompetent or because he dislikes him. He has a right to seek his own employees, but, as is frequently said, one man's right ends where another man's commences, and the right of the employer to discharge ends with his own employment, and he must not trench upon the right of the employee to seek other employment by which he may support himself and his family, and it is for the public interest that the largest liberty to seek employment should be before every man, whatever may be his employment or whatever may be his business, trade, or occupation. It is also a matter of public interest to encourage men in becoming proficient in their employment. It is, of course, a matter of public policy that a railroad company should have the right to employ such men as it sees fit and to judge for itself of the competency of its employees. There is no doubt about that. It is, however, for the public interest that a man who is skilled and who has become proficient in his employment should be able to find employment, if not with one railroad, with another railroad, or some other railroad—at least that the field should be open to him, that he should have that right; and while a railroad company may discharge its men and not employ them themselves, they trench upon the rights of the employees whenever they, by one deed or another, seek to prevent their employees from getting employment of other railroad companies, or combine or conspire in any way to prevent it, as is charged in this petition, and the matters alleged in the petition are, on demurrer, to be taken as confessed.

Of course there may be an injury that is not a legal injury resulting from a company discharging one of its employees, and so long as they simply discharge him their right to make the discharge should not be questioned; but if they make a combination, as is charged in this petition, with other companies that they shall not employ him, then it seems to me they go beyond their legal right.

The matters alleged here are sufficient to constitute a cause of action against the defendant, and the demurrer will therefore be overruled.

EXTRACT RELATING TO LABOR FROM THE NEW CONSTITUTION OF UTAH.

By act of Congress approved July 16, 1894, it was provided that the people of the Territory of Utah might call a convention to form a constitution and do other necessary things toward their becoming a State of the Union. This convention assembled in Salt Lake City March 4, 1895, and continued in session until May 8, 1895. It framed a State constitution, which was submitted to the voters of the Territory at an election held November 5, 1895, and was by them adopted. The only further action needed to constitute Utah a sovereign State of the nation was the issue by the President of the usual, formal proclamation to that effect which took place Saturday, January 4, 1896.

The following is a copy of Article XVI, relating to labor:

SECTION 1. The rights of labor shall have just protection through laws calculated to promote the industrial welfare of the State.

SEC. 2. The legislature shall provide by law for a board of labor, conciliation, and arbitration, which shall fairly represent the interests of both capital and labor. The board shall perform duties and receive compensation as prescribed by law.

SEC. 3. The legislature shall prohibit:

First. The employment of women or of children under the age of 14 years in underground mines.

Second. The contracting of convict labor.

Third. The labor of convicts outside prison grounds, except on public works under the direct control of the State.

Fourth. The political and commercial control of employees.

SEC. 4. The exchange of black lists by railroad companies or other corporations, associations, or persons is prohibited.

SEC. 5. The right of action to recover damages for injuries resulting in death shall never be abrogated, and the amount recoverable shall not be subject to any statutory limitation.

SEC. 6. Eight hours shall constitute a day's work on all works or undertakings carried on or aided by the State, county, or municipal governments, and the legislature shall pass laws to provide for the health and safety of employees in factories, smelters, and mines.

SEC. 7. The legislature, by appropriate legislation, shall provide for the enforcement of the provisions of this article.

NOTE REGARDING BUREAUS OF STATISTICS OF LABOR.

The following minor emendations are offered to the table relating to dates of establishment, etc., of bureaus of labor statistics printed on pages 110 and 111 of Bulletin No. 1:

MARYLAND.—February 25, 1892, a new organic act relating to this bureau was passed in which, in addition to ordinary labor statistics, provision was made for gathering statistics of agriculture, mining, transportation by railroad and other means, and of shipping and commerce. Also that reports should be made annually instead of biennially as heretofore. The new bureau is known officially as the Bureau of Industrial Statistics.

CONNECTICUT.—During the existence of the original bureau (July 12, 1873, to July 23, 1875) two annual reports were made, instead of one as stated in Bulletin No. 1, one in May, 1874, and one in May, 1875.

BULLETIN

OF THE

DEPARTMENT OF LABOR.

No. 3—MARCH, 1896.

ISSUED EVERY OTHER MONTH.

EDITED BY

CARROLL D. WRIGHT,
COMMISSIONER.

OREN W. WEAVER,
CHIEF CLERK.

WASHINGTON:
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CONTENTS.

	Page.
Editorial note	221, 222
Industrial communities, by W. F. Willoughby, of the Department of Labor.	223-264
Digest of recent reports of State bureaus of labor statistics:	
Connecticut	265-267
Iowa	268
Montana	268, 269
Nebraska	270
New York	271-273
North Carolina	274, 275
North Dakota	275, 276
Pennsylvania	276-278
Rhode Island	278-280
Tennessee	280, 281
West Virginia	281, 282
Ninth report on the annual statistics of manufactures in Massachusetts....	283-288
Digest of recent foreign statistical publications.....	289-312
Decisions of courts affecting labor.....	313-332
Extract relating to labor from the new constitution of South Carolina.....	333

BULLETIN
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WASHINGTON.

MARCH, 1896.

EDITORIAL NOTE.

During the past two or three years a statement purporting to give the relation of wages to cost of production, or the proportion of labor cost to the whole cost, has been going the rounds of the press. This statement has generally been in the following form:

Mr. Carroll D. Wright, the national labor statistician, has figured out that the average rate of wages per year paid in the United States is \$347, and the average product of each laborer is valued at \$1,888. This gives the employer 82.2 per cent, while the man who does the work and produces the results is allowed a paltry 17.8 per cent. In spite of our boasted free country and high wages, the fact remains that the proportion of the proceeds of his labor paid to the American workingman is smaller by far than that paid to any other workingman in any civilized or uncivilized country on the globe.

Sometimes the article varies in its statement, both in percentages quoted and in other essential features, but usually conforms very closely to the foregoing extract, which has been taken literally from one of the newspapers in which it appeared. The prominence given to this statement warrants its notice in the Bulletin. Ordinarily it is not our purpose to use its pages for current items, but the figures quoted and the statement that they are upon the authority of the Commissioner of Labor make this case an exception. The figures themselves are in the main correct; they relate more particularly to the census of 1880 than to any other collection of data. An analysis of the figures and the facts underlying them shows the fallacy of the conclusion drawn from them.

If the aggregate wages paid in the manufacturing and mechanical industries of the United States, as shown by the census of 1880, be divided by the total number of employees to whom the wages were

paid, the quotient will be 347, thus determining the average wages paid to the employees in the manufacturing and mechanical industries of the country as \$347. Dividing the aggregate value of all the products of manufacturing and mechanical industries by the number of employees engaged therein, the quotient is 1,965, showing that the average product per employee was \$1,965. Now, \$347 is 17.7 per cent of the gross value of the per capita product, as stated, leaving a balance, of course, of 82.3 per cent, or \$1,618, which the originator of the statement quoted above assumes goes to the employer. The 82.3 per cent of the total product, or \$1,618 per capita, covers all expenses of production, cost of materials, miscellaneous items, profit, deterioration, interest—everything, in fact, which can be counted as cost of production other than wages. Taking the Eleventh Census—that for 1890—it is found that the value of the gross product per capita for the number of employees engaged in manufacturing and mechanical industries was \$2,204, and the average annual wages per employee, computed for 1890 as already computed for 1880, was \$445. The writer of the statement quoted above would assume, for the Eleventh Census, that while \$445 was paid to labor, \$1,759 went to the employer. As a matter of fact, of the total product per capita, 20.18 per cent went to labor, 55.08 per cent for materials, and 24.74 per cent to miscellaneous expenses, salaries, interest, profits, etc.

All statements like that quoted above are fallacious in their application. While the figures in themselves are in the main fairly correct, and the percentages so, the balance, or 82.2 per cent, does not go to the employer, but, as shown, largely for raw materials; and of the amount paid for raw materials the bulk goes to labor for their production. That the statement emanates from the Commissioner of Labor is an assumption without any authority. From what sources the comparison with workingmen of other countries is secured is not known, but the concluding statement in the quoted article is undoubtedly as fallacious as the one which gives to the employer 82.2 per cent of the value of the product.

C. D. W.

INDUSTRIAL COMMUNITIES.^(a)

BY W. F. WILLOUGHBY.

CHAPTER I.

INTRODUCTION.

The growth of the large industry and the creation of special industrial centers constitute two of the most marked industrial changes of recent years. They are the last steps in the evolution of the factory system from the régime of individual handicraft production. This has necessitated the aggregation in one center of large numbers of workingmen, who, with their families, are dependent upon a single industry, and this in turn has given rise to conditions and problems peculiar to such places. The present study deals with the results of an investigation into the conditions of labor and industry in those special industrial centers where a large number of workingmen have been brought together in one place, all dependent upon a single large establishment, and under such conditions as to constitute more or less self-contained communities.

The town of Essen, Germany, the seat of the great iron and steel works of Friedrich Krupp, is the best and most widely known example of this class of industrial communities in Europe. Essen has therefore been taken as the type of communities to be investigated, and the effort has been made to consider all the industrial centers of importance closely approaching it in character.

Inevitably in such centers there have developed systems of special institutions that give to each a special life and character of its own. It has been thought a matter of importance to determine as far as possible what changes have here been introduced into the organization of industry, and the results, beneficial or otherwise, to which they have given rise.

The most important of these results is the enormous development of common interests. Greater interdependence of interests, both between the workingmen themselves and between the workingmen and their employers, is the fundamental result of all recent industrial changes.

^a This article is the first of a series upon this subject to be published in successive numbers of the Bulletin. Each article will be complete in itself, giving the results of the investigation as to one or more communities. The investigation was made by the author during personal visits to the several communities dealt with. The author desires to express his sense of obligation to the officials of the companies whose operations furnish the subject-matter of these articles for their courteous assistance, which alone has rendered the study possible.

The larger the industry and the greater the number of employees gathered together in the same place, the greater the interdependence of interests, and the greater the consequent need for joint action.

A second important result is the changed relations between the employers and employed. The last half century has witnessed a radical change of thought in regard to this point. Formerly, in what M. Leroy Beaulieu calls the chaotic period of the large industry, employers were almost of one mind, namely, that their duties toward their employees ceased with the payment of their wages. If obligation there was, they believed that it was on the part of the workingmen for the employment furnished them. To-day much of this is changed. The owners of the means of production, in great part, feel that all should be done that can be, consistent with the financial prosperity of their establishments, to render the conditions of labor favorable. This change between the relations of the employer and employed is most marked in the case of the industrial centers coming within the field of this investigation. It is indeed the dominant fact that gives to these places their special character as distinguished from other industrial localities. The condition of affairs where an industrial undertaking is carried on during successive generations in the same place, and where, as a result, there has grown up around it a class of workingmen who, entering the employment of the establishment as boys, have spent the entire active portion of their lives in its service, tends to create feelings of mutual obligations of exceptional strength. These obligations are mostly on the part of the employers.

To cite but a few of them, there are: The care of public health; the provision against accidents; the erection of dwellings where the workingmen are not already suitably housed; the encouragement of habits of economy and foresight, etc. This by no means implies that employers should look upon employees as persons to be taken care of, or that the expense of institutions for their benefit should be wholly borne by them. There is no doubt that a company can do a great deal in the way of the promotion of institutions and the encouragement of habits of economy among its employees without at all subjecting itself to the charge of paternalism.

In all great industrial establishments one can conceive of but three principal *modi vivendi* between the employers and their employees: First, indifference; second, patronage, where institutions are created for the benefit of employees by the employer, over which he exercises absolute control; third, mutuality, or the encouragement of the organization of institutions by workingmen, the management of which is as far as possible left in their hands.

From a second point of view, then, this is in great part an investigation of institutions that have been freely organized in connection with industrial establishments for the benefit of workingmen. To this end, in the choice of places for investigation, special care was taken to select those that seemed to have institutions the best developed or the

most worthy of study. It is for this reason that European establishments have been selected for investigation. In general, industrial problems are felt in greater intensity in Europe than in America, and consequently greater opportunities are offered for a study of the means that have been devised to meet them.

A study of the report that follows shows that workingmen's institutions in connection with large industrial establishments take the form of: (1) The housing of employees and the provision of facilities by which workingmen are aided to acquire homes of their own; (2) the organization of a public-health service, the maintenance by the company of physicians, the erection and management of hospitals, etc.; (3) the organization of a pension fund for old employees; (4) the organization of mutual-aid societies among the employees for the aid of members in cases of accident, sickness, or death; (5) the organization of cooperative distributive societies, cooperative bakeries, etc.; (6) education; (7) recreation; and occasionally, but, when existing, of great importance, (8) a system of profit sharing or cooperation.

Concerning two of these classes of institutions, the Department of Labor has already published reports, that on the Housing of the Working People and that on Compulsory Insurance in Germany and in Other Countries in Europe. Both of these can be consulted with great profit in connection with the present subject.

The first has confined itself rather strictly to a description of the technical details of the better types of houses erected as workingmen's dwellings, while the building up of the whole community and the policy pursued regarding the provision of workingmen's houses are the features here considered.

The second report relates only to compulsory insurance of workingmen.

In the present investigation, however, there is afforded a study of the best types of privately organized and conducted systems of accident, sickness, and old age pension funds. The question of the relative merits of compulsory and voluntary insurance is one of great importance, and the effort has therefore been made to give in every case not only the results of the practical operation of each, but the general spirit underlying each. In view of the great prominence of the question of workingmen's insurance in Europe at the present time, the opportunity for a comparison of the two systems will be of especial interest and value.

Especial attention should be directed to two other features of the present investigation.

The first of these is the opportunity afforded of comparing past with present conditions. Such a comparison, to be of value, should relate to the same locality, industry, and, if possible, the same establishment, in order to be sure that all elements that should enter into the comparison have been taken account of. The cases where this can be done are exceedingly rare, and the opportunity here afforded is exceptional. The statistical material has therefore been presented in such a way as to show conditions, not only at the present time, but for a period of as

many years as possible. There is thus afforded an opportunity for a statistical comparison of the conditions of the same body of men where the general and physical conditions are the same throughout the period under comparison.

The second feature to which attention is directed is that of the stability of employment. The inability of the workingman at times to find employment is one of the greatest hardships that he has to endure. If the growth of the large industry has the tendency to stability of employment as well as of production, there can be no doubt that its development has rendered a vast service, in this respect, for the improvement of the general condition of wage earners.

It is advisable at this point to state the reasons for the selection in each particular case of the centers that have been investigated. Especial prominence has been given to the coal-mining industry, for reasons that are obvious. Mining occupies a unique position in the industrial world. The location of the mines in the open fields renders the creation of special industrial centers in most cases a necessity. Again, the fact that mining has been, and in all probability will continue to be, carried on during successive generations at the same place, differentiates it widely from manufacturing, strictly speaking. The result of this is that there tends to grow up around the mines a class of workingmen among whom the pursuit of mining is almost hereditary. A condition of affairs is created where workingmen enter the employ of the mining companies as boys, succeeding their fathers, remain until incapacitated for work through sickness or old age, and are succeeded in turn by their children. The miners are thus almost exclusively recruited from among the surrounding population, and may almost be deemed to have acquired prescriptive rights in the premises, as far as the right of employment is concerned.

To represent this industry, therefore, the two important mining companies of Anzin and Blanzky, the one in northern and the other in southeastern France, have been chosen as the subjects of Chapters II and III, respectively. The reasons dictating their particular selection were that they were the largest mining companies of France, and among the largest in Europe, employing together over 20,000 men; that they have had a continuous existence, the one over one hundred and the other over fifty years; and, more important than all, the character of the workingmen's institutions that have developed there renders them especially valuable places for investigation.

It is scarcely necessary to state the reasons for the selection of Essen, Germany, to which Chapter IV is devoted. Essen is the seat of the great iron works of Friedrich Krupp, giving employment to over 25,000 workingmen, with institutions there organized for the welfare of the workingmen that have earned a world-wide reputation. So firmly is this establishment founded that it presents almost the same elements of stability as those offered by mining companies.

The town of Guise, France, the subject of Chapter V, was selected

because it is an example of a purely self-contained community. It is worthy of study, both as being the most successful example of an industry carried on as an absolutely cooperative enterprise, and as being a most remarkable effort to put into practice many of the essential features of a socialistic régime. Whatever the opinion of the reader may be regarding the principles involved, the mechanism by which the employees were enabled to acquire the ownership of the plant in which they labored, without entailing the slightest pecuniary sacrifice on the part of its owner, their former employer, the method devised for the conduct of the business on principles of strict mutual-ity, and the means adopted for preventing the ownership of the property from getting into the hands of outsiders, are worthy of the closest study, especially as the scheme has now been in successful operation over fifteen years.

The study of the mining company of Mariemont and Bascoup, in Belgium, to which a part of the final chapter (VI) is devoted, is useful on account of the opportunity afforded of presenting the results of two extremely interesting workingmen's institutions, viz, that of the councils of conciliation and arbitration, organized by the company, and that of the system of old age and invalidity pension funds, which is not peculiar to this one company, but pertains generally to all coal-mining companies in Belgium.

The concluding chapter also gives an account of a number of other industrial villages, which, while not of sufficient importance to warrant detailed descriptions, should yet be accorded brief mention.

The method of investigation pursued has been that of selecting particular places and making in each case a detailed study of the conditions of labor as they exist there. The advantages of this monographic method are evident. In this way only is it possible to investigate in detail all the various elements going to influence the conditions of life and labor surrounding the workingmen; and the subject of this study is the influence that the method of organization of industry, existing in each place selected, has upon the whole life of the individual.

Again, a study of workingmen's institutions to be of value requires an examination of concrete examples of such institutions, their constitutions, organization, and results of operation during a series of years.

It would be a matter of considerable value if exact statistical comparisons could be made of conditions in these special communities with those under the ordinary conditions of production. It is manifest, however, that exterior conditions can not be established with sufficient exactness to make the application of the strict statistical method feasible. This does not, however, prevent the student, after making a study of all the elements entering into the life of the workingmen in the communities described, from making a comparison with conditions as he knows them to exist elsewhere. Such a comparison, if the subtle conditions of the problem are considered, will be of more value than any that could be made by the mere juxtaposition of figures.

CHAPTER II.

COAL MINING COMPANY OF ANZIN, FRANCE.

No industry offers better opportunities for the study of the conditions of labor and industry in the special industrial communities of the nature comprehended within the scope of the present report than that of the mining of coal. The industry is at once one of the most important in America or Europe; one that must be carried on on a large scale, and one the conditions surrounding the conduct of which require the aggregation of a great many workingmen and their families in special industrial communities. Two of the most important mining companies of Europe have, therefore, been selected for a detailed study, that of Anzin in northern and Blanzky in southeastern France. A study of these centers affords a knowledge, not only of the conditions of labor in two particular places where the community of interests of the entire population is as marked as in any on the continent, but of the conditions generally under which coal is mined.

In France the mining of coal is carried on under concessions granted by the central Government, and is under the direct control of its corps of mining engineers. In 1893, the last year for which official figures are obtainable, there were 298 concessions under which operations were actually prosecuted. It must be understood, however, that the same company often possesses a number of concessions of territory. The following table will show the general importance of the coal-mining industry in France during recent years:

PRODUCTION OF COAL AND EMPLOYEES OF COAL MINES IN FRANCE, 1870 TO 1893.

Year.	Production (tons of 2204.6 lbs.).	Total em- ployees.	Year.	Production (tons of 2204.6 lbs.).	Total em- ployees.	Year.	Production (tons of 2204.6 lbs.).	Total em- ployees.
1870.....	13,330,000	82,700	1878....	16,961,000	106,400	1886....	19,910,000	102,400
1871.....	13,259,000	83,600	1879....	17,111,000	102,500	1887....	21,288,000	103,200
1872.....	15,803,000	91,900	1880....	19,362,000	107,200	1888....	22,603,000	105,000
1873.....	17,479,000	105,500	1881....	19,776,000	106,400	1889....	24,304,000	110,900
1874.....	16,908,000	106,300	1882....	20,604,000	108,300	1890....	26,083,000	121,600
1875.....	16,957,000	108,700	1883....	21,334,000	113,000	1891....	26,025,000	131,800
1876.....	17,101,000	110,800	1884....	20,024,000	109,400	1892....	26,179,000	133,200
1877.....	16,805,000	108,900	1885....	19,511,000	101,600	1893....	25,651,000	132,600

Though coal was mined in 1893 in 41 departments, seven departments produced nine-tenths, and of these the two adjoining departments of the Nord and Pas-de-Calais, in the north of France, produced considerably over one-half of the total quantity mined. The mines of the

Coal Mining Company of Anzin are situated in the former of these two departments in the arrondissement of Valenciennes. The company is the most important coal-mining company in France. Alone it produced in 1893 over three-fifths of the coal mined in its department, and one-ninth of the total output for the whole country. The first search for coal in this region was commenced in 1716 by prospectors, who afterwards organized the company of Anzin. Coal was discovered in 1720. The organization of the present company of Anzin, however, was not effected until November 19, 1757. Since that date its existence has been continuous. The following table, giving its annual production since 1757, shows its progress in importance. The figures for the years prior to 1789 represent approximations or estimates based on various data.

PRODUCTION OF COAL OF THE COAL MINING COMPANY OF ANZIN, 1757 TO 1893.

Year.	Production (tons of 2204.6 lbs.).	Year.	Production (tons of 2204.6 lbs.).	Year.	Production (tons of 2204.6 lbs.).	Year.	Production (tons of 2204.6 lbs.).	Year.	Production (tons of 2204.6 lbs.).	Year.	Production (tons of 2204.6 lbs.).
1757..	102,000	1780..	238,000	1803..	229,443	1826..	376,986	1849..	614,900	1872..	2,196,435
1758..	101,000	1781..	238,500	1804..	208,382	1827..	400,668	1850..	669,999	1873..	2,191,500
1759..	103,000	1782..	239,000	1805..	225,813	1828..	406,593	1851..	648,062	1874..	1,922,037
1760..	110,000	1783..	240,000	1806..	230,693	1829..	410,632	1852..	705,633	1875..	2,058,558
1761..	119,000	1784..	245,000	1807..	194,188	1830..	508,708	1853..	803,812	1876..	2,063,931
1762..	128,000	1785..	252,000	1808..	252,106	1831..	460,864	1854..	856,295	1877..	2,042,035
1763..	135,000	1786..	260,000	1809..	260,202	1832..	472,959	1855..	947,936	1878..	1,979,454
1764..	146,000	1787..	272,000	1810..	279,865	1833..	541,504	1856..	920,574	1879..	1,980,934
1765..	152,000	1788..	280,000	1811..	268,815	1834..	573,239	1857..	919,187	1880..	2,314,008
1766..	160,000	1789..	290,000	1812..	245,092	1835..	591,836	1858..	950,889	1881..	2,264,955
1767..	165,000	1790..	310,000	1813..	289,840	1836..	623,546	1859..	907,543	1882..	2,215,611
1768..	178,000	1791..	291,000	1814..	233,023	1837..	651,511	1860..	930,700	1883..	2,210,702
1769..	180,000	1792..	275,500	1815..	247,404	1838..	659,644	1861..	958,610	1884..	1,720,306
1770..	175,000	1793..	80,000	1816..	250,044	1839..	707,748	1862..	993,950	1885..	2,070,442
1771..	183,000	1794..	65,000	1817..	226,856	1840..	623,312	1863..	1,053,334	1886..	2,337,439
1772..	190,000	1795..	123,600	1818..	334,482	1841..	643,623	1864..	1,067,017	1887..	2,504,412
1773..	202,000	1796..	138,631	1819..	323,947	1842..	721,030	1865..	1,225,425	1888..	2,595,581
1774..	210,000	1797..	184,791	1820..	330,189	1843..	642,280	1866..	1,348,812	1889..	2,857,663
1775..	220,000	1798..	213,540	1821..	353,783	1844..	597,953	1867..	1,441,002	1890..	3,121,552
1776..	225,000	1799..	248,076	1822..	340,489	1845..	714,755	1868..	1,617,621	1891..	2,933,724
1777..	234,000	1800..	213,840	1823..	318,570	1846..	803,804	1869..	1,606,075	1892..	2,818,529
1778..	236,000	1801..	203,264	1824..	327,327	1847..	774,896	1870..	1,633,818	1893..	2,975,691
1779..	237,500	1802..	216,274	1825..	358,457	1848..	618,502	1871..	1,715,878		

The company has also established several collateral industries that, from their nature, can be carried on in connection with the mining of coal. It thus possesses 340 coke furnaces; three factories for the manufacture of bricks of compressed coal dust; a private railroad 37 kilometers (22.99 miles) long, which is used not only for the transportation of coal, but is also operated as a public road for the conveyance of passengers and freight; a special shop for the repair of cars; another for that of locomotives; a workshop for mechanical constructions; a foundry and boiler shop for the construction as well as the repair of machines used in their works, and various woodworking shops.

The total number of employees during the remoter periods can not be given with the same accuracy and completeness. According to various authorities the number of employees was estimated to be in 1783, 3,110; in 1789 and 1790, 4,000; in 1848, 6,879; in 1850, 8,000, and in 1860, 8,590. The following table shows the total number of employees each year from 1870 to 1894, inclusive, according to whether they were

engaged in the operations of mining proper or in the other collateral services of the company:

EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN ENGAGED IN COAL MINING AND OTHER INDUSTRIES, 1870 TO 1894.

Year.	Mining proper.			Other.	Total.	Year.	Mining proper.			Other.	Total.
	Above ground.	Below ground.	Total.				Above ground.	Below ground.	Total.		
1870..	968	8,165	9,133	.....	.....	1883..	1,738	10,117	11,855	2,181	14,036
1871..	1,102	8,481	9,583	.....	.....	1884..	1,381	8,860	10,241	1,770	12,011
1872..	1,293	9,290	10,583	.....	.....	1885..	1,525	8,103	9,628	1,629	11,257
1873..	1,584	9,933	11,517	.....	.....	1886..	1,529	8,182	9,711	1,689	11,400
1874..	1,687	10,300	11,987	.....	.....	1887..	1,488	8,269	9,757	1,643	11,400
1875..	1,637	10,649	12,286	.....	.....	1888..	1,506	8,241	9,747	1,734	11,481
1876..	1,800	10,900	12,700	.....	.....	1889..	1,516	8,433	9,949	1,862	11,811
1877..	1,807	11,074	12,881	.....	.....	1890..	1,564	9,031	10,595	1,814	12,409
1878..	1,830	11,085	12,915	.....	.....	1891..	1,581	9,221	10,802	1,927	12,729
1879..	1,988	11,013	13,001	2,203	15,204	1892..	1,588	9,048	10,636	2,030	12,666
1880..	1,956	10,814	12,770	2,558	15,328	1893..	1,620	9,029	10,649	2,049	12,698
1881..	1,873	10,978	12,851	2,502	15,353	1894..	1,577	9,098	10,675	1,929	12,604
1882..	1,796	10,407	12,203	2,291	14,494						

The following table gives for the years 1883 to 1892, inclusive, the number of employees according to the general division of service:

EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN ENGAGED IN COAL MINING, BY NATURE OF WORK PERFORMED, 1883 TO 1892.

[The totals in this table do not agree with those in the preceding table, as they represent the condition of affairs for a particular date rather than an average for the year.]

Year.	Actual work of min- ing.		Mainte- nance and repairs.		Transpor- tation.		Filling in exhausted veins.		Oversee- ing.		Total be- low ground.		Total above ground.		Grand total.	
	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.
1883..	5,475	47.2	1,493	12.9	1,261	10.9	1,361	11.8	271	2.3	9,861	85.1	1,729	14.9	11,590	100
1884..	5,284	53.2	876	8.8	1,162	11.7	1,023	10.3	241	2.5	8,586	86.5	1,344	13.5	9,930	100
1885..	5,786	60.0	510	5.3	995	10.3	581	6.0	230	2.4	8,102	84.0	1,547	16.0	9,649	100
1886..	5,848	61.1	470	4.9	1,012	10.6	482	5.1	232	2.4	8,044	84.1	1,525	15.9	9,569	100
1887..	6,118	63.1	458	4.7	998	10.3	396	4.1	226	2.3	8,196	84.5	1,500	15.5	9,696	100
1888..	6,344	65.0	396	4.0	993	10.2	307	3.1	212	2.2	8,252	84.5	1,509	15.5	9,761	100
1889..	6,547	65.7	374	3.8	1,036	10.4	295	2.9	226	2.3	8,478	85.1	1,483	14.9	9,961	100
1890..	6,974	65.4	444	4.2	1,115	10.5	324	3.0	240	2.2	9,097	85.3	1,566	14.7	10,663	100
1891..	7,004	65.5	407	3.8	1,146	10.7	294	2.7	243	2.3	9,094	85.0	1,604	15.0	10,694	100
1892..	6,793	64.3	416	4.0	1,193	11.3	320	3.0	243	2.3	8,965	84.9	1,597	15.1	10,562	100

a The addition of the total employees below and above ground does not produce the grand total here shown. The figures are given, however, as reported to the Department.

THE GENERAL CONDITIONS OF LABOR.

The aggregation of over 12,000 employees in one locality, who, with their families, are all dependent upon a single industry, and live under practically the same conditions, furnishes an excellent opportunity for the study in detail of the influences surrounding an important body of workingmen engaged in one of the principal industries of the country. This description will naturally fall into two parts: First, the general conditions of labor; second, the numerous workingmen's institutions, such as pension funds, cooperative stores, mutual aid societies, etc., for which Anzin has been remarkable during the past half century.

The employees of the company are almost invariably obtained from among the population of the surrounding country. For the most part they enter the employment of the company as children. In probably the majority of cases they are the children of present employees; and members of the same family thus appear upon the pay roll of the company during several generations.

Formerly children destined for work below ground were admitted at the age of 10 years. In 1874 the minimum age limit was raised to 12, and again, by the law of November 2, 1892, to 13 years. The minimum age limit for those employed above ground is likewise 13, except that children 12 years of age can be employed provided that they have a certificate showing a certain amount of education and one showing their physical qualification. The new recruits are at first employed in various ways on the surface, such as washing and sorting coal, and are gradually drafted into the work below ground as the need for extra workmen is felt. From that moment, if their conduct is satisfactory, their employment for life is assured. It will be seen further on that stability of employment is one of the characteristics of the conduct of industry on a large scale. Anzin is a remarkable example of this. At the age of 55 years the miner, if he desires to do so, can retire from work on an old-age pension, from a pension fund maintained by the joint efforts of the company and the miners. The period of active labor of a miner at Anzin can thus be estimated to be, on an average, 40 years. The two following tables have been introduced to show the ages of workmen on entering the employment of the company for the years 1888 to 1893, inclusive, and the actual ages of all employees in February, 1892. This date has been taken because the computation had already been made by the company, and nothing would be gained by making a calculation for a later date.

NUMBER AND PER CENT OF EMPLOYEES OF EACH SPECIFIED AGE ENTERING THE SERVICE OF THE COAL MINING COMPANY OF ANZIN, 1888 TO 1893.

Year.	Ages.										Total.
	12 years.	13 years or under 14.	14 years or under 15.	15 years or under 16.	16 years or under 20.	20 years or under 25.	25 years or under 30.	30 years or under 35.	35 years or over.	Un-known.	
1888	16	291	82	27	92	39	43	25	45	60	720
1889	7	399	80	62	209	136	128	90	71	.....	1,182
1890	38	363	77	70	183	140	84	46	36	.....	1,037
1891	14	298	37	15	43	300	27	14	9	.....	757
1892	17	330	41	11	19	217	5	5	1	.....	646
1893	11	359	46	10	15	294	4	3	1	.....	743
Total..	103	2,040	363	195	561	1,126	291	183	163	60	5,085
Per cent of total.	2.03	40.12	7.14	3.83	11.03	22.14	5.72	3.60	3.21	1.18	100

AGE OF EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN, FEBRUARY, 1892.

Employees.				Employees.				Employees.			
Age.				Age.				Age.			
	Below ground.	Above ground.	Total.		Below ground.	Above ground.	Total.		Below ground.	Above ground.	Total.
12		29	29	30	280	7	287	48	148	17	165
13	151	147	298	31	298	10	308	49	141	20	161
14	378	2	380	32	251	15	266	50	122	22	144
15	445	1	446	33	237	19	256	51	107	14	121
16	393	5	398	34	218	24	242	52	97	16	113
17	450	3	453	35	203	12	215	53	72	11	83
18	358	2	360	36	190	7	197	54	71	6	77
19	384	10	394	37	185	13	198	55	42	9	51
20	412	9	421	38	187	12	199	56	25	8	33
21	365	4	369	39	187	10	197	57	14	3	17
22	385	9	394	40	211	12	223	58	18	4	22
23	348	1	349	41	162	17	179	59	7	5	12
24	322	8	330	42	143	14	157	60	7	2	9
25	340	6	346	43	162	12	174	61	1	2	3
26	337	10	347	44	181	20	201	62	5	1	6
27	296	16	312	45	182	8	190	Total.	10, 391	661	11, 052
28	294	6	300	46	168	12	180				
29	276	14	290	47	135	15	150				

It will be noticed from the first of these two tables that a large proportion of the employees of the company enter its service as youths of 13 or 14 years of age. The apparently large number entering between the ages of 20 and 25 years is caused by their return from military duty. The great majority of them had already been in the employ of the company.

The two tables following make a comparison of the ages of workingmen at Anzin with those of all coal miners in France. The law of November 2, 1892, regulating the hours of labor of women and children, divides the workingmen into three classes: (1) Children, 13 or under 16 years; (2) minors, 16 or under 18 years; and (3) adults, 18 years of age or over. The first table compares Anzin for the year 1892 with France for 1893, according to this grouping. The second is a comparison of ages in greater detail. The conditions at Anzin, it will be seen, differ little from those of France generally.

NUMBER AND PER CENT OF EMPLOYEES, BY AGE PERIODS, AT ANZIN AND IN ALL COAL MINES OF FRANCE.

Age periods.	Employees below ground.				Employees above ground.			
	Anzin, 1892.		France, 1893.		Anzin, 1892.		France, 1893.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
13 or under 16 years.	974	9.37	4, 412	4.71	<i>a</i> 179	27.08	4, 073	10.45
16 or under 18 years.	843	8.11	5, 507	5.88	8	1.21	2, 823	7.25
18 years or over ...	8, 574	82.52	83, 766	89.41	474	71.71	32, 063	82.30
Total	10, 391	100.00	93, 685	100.00	<i>a</i> 661	100.00	38, 959	100.00

a Includes 29 twelve years of age.

PERCENTAGE OF MINE EMPLOYEES, BY AGE PERIODS, AT ANZIN AND IN ALL COAL MINES OF FRANCE.

[The figures for Anzin are for September 6, 1886; those for France were obtained from the Annales des Mines for 1885.]

Locality.	Age periods.												Total.
	12 or under 16 years.	16 or under 20 years.	20 or under 25 years.	25 or under 30 years.	30 or under 35 years.	35 or under 40 years.	40 or under 45 years.	45 or under 50 years.	50 or under 55 years.	55 or under 60 years.	60 or under 65 years.	65 or over.	
Anzin, 1886.....	8.2	19.6	12.9	14.5	11.2	10.6	9.5	8.2	3.7	1.4	0.15	0.05	100
France, 1885.....	6.6	15.2	11.2	13.7	13.0	11.4	10.0	7.8	5.4	3.3	1.4	1.0	100

The miners, properly so called, in general descend into the mines at 4 o'clock in the morning and return to the surface at 1 or 2 o'clock in the afternoon, or after nine or ten hours below ground. If the time lost in ascending and descending the shaft and a half hour's rest for lunch be deducted, there remains from eight to nine hours' actual labor. On Sundays and holidays all labor is suspended, except in certain cases for repair work. The following table shows the average number of hours present at the mine and the number of hours devoted to actual labor per day during 1891 for each mine employee of the company of Anzin. Both of these classes of information should be considered in determining the duration of labor of coal miners, as the time consumed in reaching their work varies greatly with miners in different mines. The distinction between employees working above and below ground is also made.

NUMBER AND PER CENT OF EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN, BY HOURS ON DUTY AND HOURS OF ACTUAL LABOR, 1891.

[Hours on duty includes time consumed in going to and returning from work.]

Hours of labor per day.	Employees below ground.				Employees above ground.			
	On duty.		At actual labor.		On duty.		At actual labor.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
7.....	5	.06	107	1.21	.....	.....	45	3.10
7½.....	13	.15	75	.85	.....	.....	.....	.....
8.....	20	.23	205	2.33	.....	.....	22	1.52
8½.....	48	.55	45	.51	.....	.....	.....	.....
9.....	112	1.27	956	10.85	1	.07	30	2.07
9½.....	644	7.31	443	5.03	.....	.....	.....	.....
10.....	343	3.89	681	7.73	.....	.....	.....	.....
10½.....	671	7.62	648	7.36	.....	.....	.....	.....
11.....	1,062	12.06	2,033	23.08	.....	.....	80	5.52
11½.....	962	10.92	1,003	11.39	.....	.....	.....	.....
12.....	1,015	11.52	993	11.27	.....	.....	70	4.83
12½.....	1,619	18.38	479	5.44	.....	.....	2	.14
13.....	570	6.47	454	5.15	75	5.17	164	11.31
13½.....	567	6.44	263	2.99	.....	.....	24	1.65
14.....	209	2.37	212	2.41	280	19.31	777	53.59
14½.....	250	2.84	57	.65	10	.69	.....	.....
15.....	186	2.11	102	1.16	97	6.69	179	12.34
15½.....	.....	.....	.....	.....	.....	.....	20	1.38
16.....	490	5.56	40	.45	152	10.48	21	1.45
16½.....	.....	.....	.....	.....	20	1.38	.....	.....
17.....	22	.25	12	.14	814	56.14	16	1.10
17½.....	.....	.....	.....	.....	.....	.....	.....	.....
18.....	.....	.....	.....	.....	1	.07	.....	.....
Total	8,808	100.00	8,808	100.00	1,450	100.00	1,450	100.00

A comparison of average hours of labor per day at Anzin for the year 1891 with the average hours in 1890 for the coal mines of the whole basin in which Anzin is situated (Nord and Pas-de-Calais), and for all the coal mines of France, is made in the following table.

From the comparison here given it is seen that the hours of labor are in general somewhat longer at Anzin than either in its special coal basin or in France. The difference is more pronounced in the case of hours on duty than in that of hours of actual labor.

AVERAGE HOURS OF LABOR PER DAY AT COAL MINES AT ANZIN, IN THE DEPARTMENTS OF NORD AND PAS-DE-CALAIS, AND IN ALL FRANCE.

[The figures for the departments of the Nord and Pas-de-Calais and for France were obtained from Une Notice sur le Nombre, les Salaires et la Durée du Travail des Ouvriers des Mines, en 1890, contained in the annual volume Statistique de l'Industrie Minérale et des Appareils à Vapeur en France et en Algérie pour l'année 1889.]

Locality.	Average hours per day on duty.			Average hours per day actual labor.		
	Employees below ground.	Employees above ground.	All employees.	Employees below ground.	Employees above ground.	All employees.
Anzin, 1891	9.52	11.47	9.80	9.02	10.20	9.19
Nord and Pas-de-Calais, 1890	9.40	10.50	9.23	8.80	9.50	8.26
France, 1890.....	9.45	10.46	10.00	8.13	9.39	8.35

There is probably no one feature of the modern system of organization of industry more productive of injurious results to the workingmen than the periodic interruptions to which they are subjected under present conditions in their ability to obtain work. Next to that of the amount of their wages, the question of the regularity of their employment is the one in which workingmen are most interested. The absence of a reasonable certainty of continuous employment means not only a curtailing of their earning capacity, but their demoralization generally. The constancy of employment is, then, a prime element in determining the condition of any particular class of workingmen.

The conditions at Anzin in this respect could scarcely be improved upon. During the entire year the intensity of work is equal. The table that follows shows that in the twenty-four years from 1870 to 1893, inclusive, the mines were operated almost every possible working day. If the tables relating to the number of years the workingmen have been continuously employed that are given further on be considered in connection with this one, it is evident that Anzin includes a practically stable body of workingmen, to whom the evils of lack of employment are almost unknown.

AVERAGE DAYS WORKED BY EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN DURING EACH YEAR, 1870 TO 1893.

Year.	Average days worked.				Year.	Average days worked.			
	Employees below ground.		Em- ployees above ground.	All em- ployees.		Employees below ground.		Em- ployees above ground.	All em- ployees.
	Miners.	Others.				Miners.	Others.		
1870	301	297	333	301	1882	317	303	346	310
1871	299	299	338	303	1883	304	305	345	310
1872	313	321	355	325	1884	243	246	309	254
1873	312	320	353	325	1885	257	261	301	267
1874	307	307	337	311	1886	277	283	314	288
1875	313	308	353	314	1887	282	288	318	292
1876	301	302	349	310	1888	286	288	318	293
1877	292	288	334	294	1889	284	288	323	294
1878	278	278	321	284	1890	283	288	319	293
1879	280	278	320	284	1891	278	285	319	290
1880	308	305	344	311	1892	271	277	317	285
1881	312	305	344	310	1893	278	283	319	288

Whatever advantages the workingmen of a particular locality or establishment may enjoy, their wages must, under present conditions, constitute the greatest factor in determining their economic well-being. At Anzin daily wages are but rarely paid. The wages of employees are determined by the amount of work performed, and a settlement is made fortnightly. Miners are paid so much per car of coal mined. The price per car is fixed by the company's engineer and accepted by the miner for a fortnight or for a certain distance along the vein to be mined. Formerly the miner did not transport his own coal nor maintain his passage in repair. The work of the carman was absolutely independent of that of the miner. This gave rise to serious difficulties. Either the miner complained that his coal was not carried away with sufficient rapidity, or the carman complained that a sufficient quantity of coal was not mined to keep him fully employed. This has now been entirely changed, and the present practice is for the miner to have his son or some other member of his family work with him to aid in the transport of his coal. Then, if necessary, his son can aid him in the operation of mining, or, if coal accumulates, he himself can assist in its transport. An additional advantage of the system, moreover, is that young laborers just entering the mine serve an apprenticeship under those most interested in their welfare. Under these conditions it is evident that rates of wages can not be given. In the table that follows are shown the average daily and yearly wages of all mine employees of Anzin according to the three great classes of occupations—miners, laborers below ground other than miners, and laborers above ground—with an average for the three classes combined, for the years 1870 to 1893, inclusive.

While in many industries employing workingmen of widely-varying degrees of skill, and earning equally divergent rates of wages, average yearly wages would be absolutely meaningless, this is not true of coal mining. Here the greater part of the work performed falls into a few classes of occupations, all of which require about the same degree of

skill, and in which the wages paid differ but slightly. For practical purposes, therefore, these tables give a sufficiently accurate idea of the wages of miners, as well as the variation of wages during the period covered.

AVERAGE DAILY AND YEARLY WAGES OF EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN, 1870 TO 1893.

Year.	Average daily wages.				Average yearly wages.			
	Employees below ground.		Employees above ground.	All employees.	Employees below ground.		Employees above ground.	All employees.
	Miners.	Others.			Miners.	Others.		
1870.....	\$0.71	\$0.58	\$0.45	\$0.57	\$219.19	\$171.39	\$149.10	\$171.96
1871.....	.75	.61	.45	.58	223.33	181.78	151.34	174.27
1872.....	.80	.64	.49	.62	250.70	204.44	174.71	201.97
1873.....	.92	.72	.56	.70	288.43	229.13	198.94	227.06
1874.....	.90	.71	.55	.69	275.52	218.04	185.37	214.88
1875.....	.92	.72	.56	.70	288.15	222.14	198.94	219.99
1876.....	.92	.73	.57	.71	278.27	220.90	198.03	219.58
1877.....	.82	.70	.56	.66	240.08	202.33	186.30	195.19
1878.....	.81	.67	.55	.65	224.27	185.11	177.81	185.26
1879.....	.79	.65	.54	.64	219.94	181.89	174.16	180.88
1880.....	.82	.67	.55	.66	251.45	205.44	189.22	203.23
1881.....	.82	.67	.61	.66	258.04	207.86	208.47	208.05
1882.....	.85	.69	.60	.68	261.90	211.34	208.54	211.14
1883.....	.87	.73	.66	.71	265.20	218.03	227.87	220.18
1884.....	.85	.73	.70	.72	207.01	179.92	216.79	184.89
1885.....	.85	.76	.60	.73	208.60	196.86	181.61	194.46
1886.....	.84	.76	.61	.73	233.62	214.75	191.49	211.05
1887.....	.85	.76	.56	.73	238.39	218.24	178.47	214.56
1888.....	.85	.77	.60	.74	242.87	220.78	180.00	215.91
1889.....	.89	.80	.61	.77	252.68	232.08	195.99	226.55
1890.....	1.02	.90	.66	.86	287.30	260.90	210.84	253.49
1891.....	1.06	.94	.68	.90	294.56	268.19	216.57	260.55
1892.....	1.06	.94	.67	.89	287.94	260.32	213.21	253.21
1893.....	1.05	.93	.67	.89	291.46	264.76	213.25	256.87

It is scarcely necessary to call attention to the value of a record such as that contained in the table just given. While it can not be used for exact comparison with wages paid elsewhere, inasmuch as it relates to the earnings of several classes of workmen combined, it shows clearly the relative variations in wages of coal-mine employees at Anzin. The showing is a very gratifying one as regards the increasing economic welfare of the laborers. From an average daily wage of 2.96 francs (57 cents) the rate for all employees increased rather slowly during the first decade, being but 3.42 francs (66 cents) in 1880. In the next ten years, however, wages had increased materially, being 4.48 francs (86 cents) in 1890, while during the next three years a still further increase to 4.61 francs (89 cents) was recorded. The significance of this increase is still more apparent if annual wages be contrasted. In 1870 the average for all employees was 890.96 francs (\$171.96). In 1880 the average was 1,053 francs (\$203.23), in 1890 had increased to 1,313.44 francs (\$253.49), and in 1893 was 1,330.94 francs (\$256.87). These figures represent an increase of a little over 49 per cent during the period.

The only possible element that could enter into this showing to vitiate the deduction that a real increase in wages had resulted, not only for all employees combined, but for each of the different classes of workmen entering into the calculation, is that the number of employees in higher-paid classes of work figure to a greater extent in later than

in former years. Reference to the table already given (page 230), showing the number and per cent of workmen according to nature of work done, shows a remarkably similar proportional distribution of the personnel among the different classes of work. There is every reason to believe, therefore, that all classes of workmen have profited in the general increase in wages.

That these figures, however, may serve as an index of the absolute as well as the relative economic condition of the laborers, they need to be completed by, or interpreted in the light of, two important considerations: First, the amount of supplementary advantages enjoyed by the workmen, such as cheap housing, medical attendance, free fuel, etc.; second, the quantity of necessary or usual articles of consumption that their wages will purchase, or, to state it in another way, the relation between the amount of wages and the prices of commodities.

Concerning the first point—that of supplemental advantages—a detailed consideration will be given later on. For the present purpose it is sufficient to insert a table showing, for each of the eleven years from 1883 to 1893, the total and average wages, the total and average value of supplemental advantages, and the proportional addition to wages that the supplementary advantages represent. From this table it will be seen that there has been a fairly constant tendency for the absolute value of supplemental advantages to increase, and that this value represents a slightly increasing proportion of the average amount received as wages. At the present time, speaking in round numbers, it can be said that the supplemental advantages enjoyed by workmen at Anzin represent at least a 10 per cent addition to their wages.

WAGES AND ADVANTAGES SUPPLEMENTARY TO WAGES OF EMPLOYEES OF THE
COAL MINING COMPANY OF ANZIN, 1883 TO 1893.

[The figures showing the amount of wages and advantages supplementary to wages per employee were computed by the Coal Mining Company of Anzin from data which are not known; hence they differ slightly from those computed on the basis of the total number of employees given elsewhere in the report.]

Year.	Wages.	Advantages supplementary to wages.	Total wages and supplementary advantages.	Wages per employee.	Supplementary advantages per employee.	Total wages and supplementary advantages per employee.	Per cent of supplementary advantages of wages.
1883.....	\$2,962,357.00	\$236,372.99	\$3,198,729.99	\$220.18	\$17.34	\$237.52	7.98
1884.....	2,257,135.00	225,665.52	2,482,800.52	184.89	19.55	204.44	9.99
1885.....	2,131,492.00	215,838.65	2,347,330.65	194.46	20.40	214.86	10.12
1886.....	2,305,771.00	220,223.43	2,525,994.43	211.05	19.35	230.40	9.55
1887.....	2,341,283.00	233,929.97	2,575,212.97	214.56	20.55	235.11	9.99
1888.....	2,372,163.00	253,933.89	2,626,096.89	215.91	22.05	237.96	10.70
1889.....	2,532,546.00	266,397.47	2,798,943.47	226.55	22.58	249.13	10.52
1890.....	2,947,777.39	282,043.95	3,229,821.34	253.49	22.53	276.02	9.56
1891.....	3,113,575.74	314,010.78	3,427,586.52	260.55	24.63	285.18	10.08
1892.....	2,995,476.36	321,916.35	3,317,392.71	253.21	25.61	278.82	10.74
1893.....	3,045,421.43	330,098.79	3,375,520.22	256.87	26.01	282.88	10.84

From this table it can be seen, without reproducing the figures which can easily be consulted in the table itself, that the inclusion of the additional element of supplementary advantages accentuates yet more the

increase in earnings shown in the table relating to wages proper. It should be remembered, moreover, that the value of supplementary advantages as here stated indicates only their cost to the company. It is probable that if they had been furnished by the workmen themselves their cost would have been considerably greater. The real value of these supplementary advantages is therefore without doubt in excess of that shown in the table.

Concerning the second point, it is of interest to note the study, with accompanying tables, made by M. Georges Michel, of the *Économiste Français*, on this particular question for the miners of Anzin, and included in his book entitled *Histoire d'un Centre Ouvrier (Les Concessions d'Anzin)*. The most important of his tables—the one in which he has brought into correlation the average prices of commodities with the budget of a typical family, composed of father, mother, and four children, of which the eldest has commenced work, for each decade from 1820 to 1887—is here reproduced. It should be borne in mind that this table is but a calculation based on such data as were obtainable. M. Michel first made the calculation for the period 1880 to 1887, in which it is reasonable to suppose that substantial accuracy was secured. Then, using this as a basis, and taking into account, not only the variation in the prices of commodities and of average earnings, but of changes in the habits of the workmen as well, he was able to calculate the budgets for the preceding decades. The officials of the company, moreover, examined the figures of M. Michel, and after making a few corrections, expressed themselves as satisfied that they represented a substantial approximation to the true condition of affairs.

COST OF LIVING OF A TYPICAL FAMILY OF SIX AT ANZIN, 1820 TO 1887.

Objects of expenditure.	Unit.	1820 to 1830.			1830 to 1840.			1840 to 1850.			1850 to 1860.		
		Quantity.	Price.	Value.	Quantity.	Price.	Value.	Quantity.	Price.	Value.	Quantity.	Price.	Value.
Bread	Pound.	2,337	\$0.026	\$60.76	2,337	\$0.028	\$65.44	2,337	\$0.029	\$67.77	2,337	\$0.032	\$74.78
Meat	Pound.	66	.061	4.03	99	.070	6.93	99	.096	9.50	121	.105	12.71
Milk	Quart.	106	.024	2.54	137	.024	3.29	159	.024	3.82	169	.026	4.39
Butter	Pound.	22	.131	2.88	33	.136	4.49	40	.152	6.08	44	.163	7.17
Eggs	Dozen.	100	.115	.96	150	.126	1.58	150	.127	1.59	200	.131	2.18
Fruits and vegetables purchased.				3.86			8.69			9.65			9.65
Beer	Gallon.	53	.044	2.33	132	.044	5.81	159	.044	7.00	211	.044	9.28
Alcoholic drinks				.97			.97			.97			1.16
Groceries:													
Oil	Quart.	11	.164	1.80	16	.194	3.10	16	.192	3.07	16	.205	3.28
Coffee	Pound.	18	.219	3.94	22	.218	4.80	26	.178	4.63	26	.213	5.54
Sugar	Pound.	11	.197	2.17	15	.185	2.78	18	.151	2.72	22	.154	3.39
Soap	Pound.	99	.054	5.35	99	.056	5.54	110	.050	5.50	110	.051	5.61
Miscellaneous.				1.93			1.93			2.32			2.32
Haberdashery				1.93			2.32			2.90			3.86
Table utensils .....				.97			.97			.97			1.93
Furniture				1.54			1.93			1.93			2.32
Clothing				13.51			17.76			19.30			20.27
Hats				1.54			2.32			2.90			3.86
Shoes				2.32			3.86			4.83			5.79
Rent and cultivation of garden.				11.58			13.51			14.48			14.48
Various, saloon, savings, etc.				1.93			3.86			5.79			8.69
Total expenditures.				128.84			161.88			177.72			202.66

COST OF LIVING OF A TYPICAL FAMILY OF SIX AT ANZIN, 1820 TO 1887—Concluded.

Objects of expenditure.	Unit.	1860 to 1870.			1870 to 1880.			1880 to 1887.		
		Quantity.	Price.	Value.	Quantity.	Price.	Value.	Quantity.	Price.	Value.
Bread.....	Pound.	2,315	\$0.032	\$74.08	2,315	\$0.032	\$74.08	2,315	\$0.030	\$69.45
Meat.....	Pound.	176	.118	20.77	254	.144	36.58	254	.166	42.16
Milk.....	Quart.	190	.029	5.51	232	.029	6.73	232	.029	6.73
Butter.....	Pound.	66	.207	13.66	88	.263	23.14	88	.280	24.64
Eggs.....	Dozen.	240	.143	2.86	250	.182	3.79	270	.174	3.92
Fruits and vegetables purchased.				11.58			13.51			11.58
Beer.....	Gallon.	264	.058	15.31	317	.077	24.41	317	.080	25.36
Alcoholic drinks.				1.54			1.93			1.93
Groceries:										
Oil.....	Quart.	19	.250	4.75	21	.265	5.57	21	.274	5.75
Coffee.....	Pound.	33	.198	6.53	33	.285	9.41	29	.341	9.89
Sugar.....	Pound.	31	.121	3.75	31	.131	4.06	40	.149	5.96
Soap.....	Pound.	132	.044	5.81	132	.038	5.02	132	.039	5.15
Miscellaneous				4.83			5.79			5.40
Haberdashery				5.79			6.76			6.76
Table utensils				2.32			2.90			2.90
Furniture				2.90			3.86			3.86
Clothing.....				30.88			42.46			44.39
Hats.....				4.83			5.79			5.79
Shoes.....				8.69			11.58			11.58
Rent and cultivation of garden.				15.44			16.41			16.41
Various, saloon, savings, etc.				14.48			33.78			38.60
Total expenditures.				256.31			337.56			348.21

The main interest in budgets of this character is the information afforded concerning the manner in which the workingman spends his income. Apart from this, however, it is possible, through reference to the column showing the prices of commodities which go to make up the usual articles of consumption of the workman, to determine whether the increase in wages shown in previous tables is counteracted or not through a change in the cost of articles he is accustomed to purchase. The comments of the author, in part, on this table are as follows:

“From these tables it can be seen that the greatest variations occur in the classes—

“First, meat. Workingmen in the north of France can now eat meat almost every day, while fifty years ago meat could not always be had once a week.

“Second, clothing. Although the price of materials for clothing has diminished within later years, the expenditure demanded by this item of the workingmen's budget has sensibly increased. The same observation applies to all classes of society. Formerly tastes were more simple and the style less changing. To-day the workingman feels called upon to clothe himself and family in a more elegant manner, and to follow, in a measure, the frequent changes of fashion.

“Third, various expenses. This class, in which are included the expenditures for amusements and at the drinking places, has unfortunately greatly increased. We are of the opinion that it now represents 10 per cent of the total family expenditures. It is the drinking houses that absorb all.”

WORKINGMEN'S INSTITUTIONS.

The most important part of an investigation of special laboring communities must necessarily be that of the study of the inhabitants in their mutual relations. Such a grouping of men and women with identical interests gives rise to opportunities for the organization of institutions for mutual and collective action that do not exist elsewhere.

These opportunities can be taken advantage of in three ways; either through the creation by the employer of institutions for the benefit of his employees, through the organization by the employees themselves of institutions for their mutual benefit, or through the cooperation of the employer with his employees for the purpose of securing improved conditions. It is a matter of fundamental importance which of these three policies is in each case pursued. There has been a distinct evolution of sentiment in regard to the question here involved. From the original position that they had no obligation toward their employees other than that of the payment of wages, employers, in many cases, went to the opposite extreme. Though they created admirable institutions for the benefit of their employees, they treated the latter as wards, and retained in their own hands an arbitrary management of their new creations. Since then the workingman has more and more demonstrated his ability to look after his own interests, and, conscious of his own capacities, he has chafed under any species of tutelage. The employer has in many cases responded to this new sentiment, and as far as possible has given over the management of his social institutions into the hands of those for whose benefit they are intended. At the same time the employees are encouraged to organize independent institutions of their own.

This development of self-help and self-reliance by no means resulted in a curtailment of the province or the variety of workingmen's institutions. On the contrary, the development of the association idea has rendered possible the exercise of mutual action in fields that it was impossible for employer-managed institutions to enter.

The workingmen's institutions at Anzin are a notable example of institutions organized on a liberal basis. Whether regarded from the standpoint of the generous sacrifices made by the company for their maintenance, or from that of its liberal attitude regarding the participation of employees in their management, the social institutions of Anzin are the most remarkable of any in France. A study of the constitutions and workings of these institutions will therefore be made in great detail. These institutions are, however, by no means the unique possession of Anzin. Though the same ensemble of institutions exists in no other place in France, each one is but the representative of a class of institutions found at a great many of the other important industrial centers of the country. The study here made will, therefore, be of all the more importance, as it will represent a study, not of institutions that have an isolated existence, but of those that have received a widespread application and approval.

THE HOUSING OF EMPLOYEES.

The provision of dwellings for their employees by the large industrial concerns situated outside of the large cities is, in France, almost universal. "To-day," says M. Georges Picot, in his report on workingmen's houses for the International Exposition at Paris, 1889, "there is not in France a chief of an important industry who has not made efforts to aid in the housing of his employees." To secure this end four combinations have been devised and put into practice by employers:

First. The construction of houses in which their workingmen are lodged free from payment of all rent.

Second. The construction of houses that are afterwards rented to the workingmen at reduced charges.

Third. The construction of houses and their sale to employees.

Fourth. The advancement of money or provision of land to employees to enable them to acquire or build houses of their own.

Each system has its advocates, though the first is rarely practiced. At Anzin the efforts of the company have been directed in all of the last three ways. It has erected houses that it rents at low rates; it has erected others that it sells to employees; it has advanced money to and placed land at the disposal of its employees that they might acquire houses of their own according to their individual tastes and needs. The advantages of adopting several rather than a single device are evident. The inclinations of all workingmen are not similar. Some are satisfied to pay their yearly rent and are unwilling to make the sacrifices necessary to secure homes of their own; others eagerly embrace the opportunity of becoming house owners; and yet others prize highly the privilege of buying or constructing houses upon plans selected by themselves.

In the report on the Housing of the Working People, issued by the Department of Labor, the subject of workingmen's houses in France has been considered at length. The houses at Anzin are among those of which a description has been given. There is thus no necessity of giving an account of them here, further than a bare statement of what has been done in this respect.

The first houses erected by the company for the employees were begun in the year 1826. Since then it has bought or constructed, near all of its mine openings, houses that it rents to its employees. The total number of such houses in 1893 was 2,582.

On account of economy, the system of constructing houses in solid blocks was at first adopted. The great disadvantage of this system from the point of view of morality, however, soon led to its abandonment, and thereafter only isolated houses were built. Regarding these houses at Anzin and their rents, M. Picot, in his report above cited, says: "An excellent type of house has been selected. * * * A cellar, a ground floor with a large sitting room and kitchen, a first floor with two sleeping rooms, a garden of 200 meters (2,152.8 square feet);

such is the house that rents for from 3.50 to 6 francs (\$0.67½ to \$1.16) per month, 42 to 72 francs (\$8.11 to \$13.90) per year. The house costs 2,800 francs (\$540.40). If the interest on this is calculated at 4 per cent, 112 francs (\$21.62), and maintenance and taxes at 44 francs (\$8.49), the rent ought to be 156 francs (\$30.11). The company receives, in general, 72 francs (\$13.90), or a loss of 84 francs (\$16.21) from a normal rent, which is equivalent to a loss, on 2,628 houses (the number at the end of 1888), of 220,752 francs (\$42,605.14) a year. In other words, the company obtains a net gain of 28 francs (\$5.40) from a rent of 72 francs (\$13.90), or 1 per cent on the capital invested. In no other place have we found similar figures or efforts on so large a scale."

In 1867, in order to encourage saving among its workingmen, the company commenced the construction of isolated houses with gardens, which it sold to its employees at the cost of construction and the land. Those first erected were valued at from 2,200 to 2,700 francs (\$424.60 to \$521.10) each, but those erected later were of a better model and cost from 2,700 to 3,550 francs (\$521.10 to \$685.15). Payment for the houses was made in installments until the entire amount was paid. No interest of any kind was charged. Under this arrangement 93 houses had been erected up to 1893, at a total cost of 275,207 francs (\$53,114.95). To supplement its former work, the company decided, in 1869, to commence the advancing of money to the most worthy employees who wished to buy or build houses for themselves. Here the same facility for reimbursement by partial payments was offered. The advances were also without interest. In 1888 the company had advanced a total sum of 1,446,604 francs (\$279,194.57), of which all but 101,140.09 francs (\$19,520.04) had been repaid, and a total of 741 houses had been constructed or otherwise acquired by its employees.

If to the 2,628 houses rented by the company there be added the 93 houses built by it and sold to the workingmen, and the 741 houses acquired through advances made by the company to the employees, there results a total of 3,462 houses that had been provided through the efforts of the company in 1888, and the number remained practically unchanged in 1893. In 1888 the company estimated that it had lost rent to the amount of 84 francs (\$16.21) per year on each of 2,628 houses, or a total of 220,752 francs (\$42,605.14); interest on houses sold and not paid for, 3 per cent on 67,558.12 francs (\$13,038.72), or 2,026.75 francs (\$391.16); interest on sums still due on advances made to build, 1,022.20 francs (\$197.28); making the total cost of its effort for the housing of its employees 223,800.95 francs (\$43,193.58).

OLD-AGE PENSIONS.

The continuous existence, during a long period of years, of a large industrial establishment employing thousands of men gives rise to relations of responsibility on its part for the welfare of its old employees that do not exist where an industry is carried on on a less stable or smaller scale. In a company such as that of Anzin its workingmen

have in great part entered its service as boys to continue in its employ until sickness or old age incapacitates them for work. Sons have succeeded fathers, and are themselves succeeded by their sons. It is difficult for an American to appreciate the importance that the European workingman attaches to this question of the provisions against old age. The heroic measures taken within the last ten years by Germany, in which the fullest powers of the State have been used to secure this end, illustrate the importance of the problem and its acuteness at the present time. In France the efforts made by the company of Anzin to provide for its old employees are the most important made by a private undertaking.

Previous to 1887 the company followed the practice of according to workingmen who had grown old in its service, and had become unable to work, a pension for the remainder of their lives, that constituted a direct charge upon the resources of the company. The employees participated in no way in the regulation of these pensions, nor was any portion of their wages during previous years retained to aid in the constitution of an insurance fund. There were serious objections to this system. The workingmen did not like the feeling that they were pensioners on the bounty of the company; and the pension being dependent on the financial prosperity of the company, they did not feel the same security that an independent insurance scheme would have offered. Recognizing this, on January 1, 1887, the company inaugurated a new system of old-age pensions. By this system it frankly took its workingmen into partnership and provided for the constitution, through mutual sacrifices, of an insurance fund that should be wholly independent of the company's funds or management. Though the company made sacrifices equal in amount to those under the old system, the pension was no longer a bounty but a right to which the workingman would acquire a title by years of voluntary sacrifices. This system is the more remarkable, for in 1894 the Government, as we shall see, adopted in toto its principles in framing its law regulating the insurance of miners generally throughout France. The regulations then adopted by the company concerning the granting of pensions might almost be said to have formed a model after which the French law was drawn.

The essential provisions of these regulations may be summarized in the following paragraphs:

Dating from January 1, 1887, the company agreed to deposit in the National Bank for Old-Age Pensions,^(a) in the name of each working-

^a The National Bank for Old-Age Pensions is a State institution created in 1850 and reorganized in 1886 by the law of July 20 and decree of December 28. Its operations are guaranteed by the Government and controlled by a commission organized under the Department of Commerce, Industry, Posts, and Telegraphs. Its object is to enable depositors to secure by small annual payments the right to a life pension, not to exceed 1,200 francs (\$231.60) as a maximum, at the age of 50 years, or later, as the depositor may choose. The especial idea of Parliament was to offer to the ordinary laboring man the means to insure for himself through a small regular deduc-

man who would make an equal payment, a sum equal to $1\frac{1}{2}$ per cent of the wages of the workingman. The two deposits are then recorded in an individual account book, which remains the property of the workingman. For workmen employed below ground the payments of the company commence from the time of their entering upon such work. For those employed above ground the payments of the company commence when the workmen are at least 18 years of age and have been in the employ of the company during three years. The payments of the company cease when the workingman has reached the age of 50 years. The latter, however, can defer the enjoyment of his pension, if he so desires, by continuing his personal payments. Through these payments the workingman is enabled to acquire the right to an annuity from the National Bank for Old-Age Pensions, on reaching the age of 50 years, for the remainder of his life. In case of permanent disability before reaching that age, he enters into the immediate enjoyment of a pension proportionate to his age and the amount of deposits to his credit.

In addition to these provisions whereby the company agreed to contribute toward the acquisition of pensions by workmen an amount equal to their own payments, the company further provided for the increase of these pensions as a reward for long and faithful service. When a workingman has fulfilled the double condition of being at least 35 years of age and has been ten years without interruption in the employ of the company, a special account is opened with him for the succeeding years of his connection with the company, or until he has reached the age of 55 years, or has been retired on his pension. The total can in no case exceed fifteen years. For each of these years a special supplement to the pension, when due, of 3 francs (58 cents) for workmen below and $1\frac{1}{2}$ francs (29 cents) for those above ground will be added. The total supplementary pension, except in cases of severe injuries or infirmities contracted during work, is not paid unless the workingman remains with the company until he is 50 years of age. The latter, also, can not enter upon the enjoyment of his supplementary pension until he ceases to work for the company. For workmen employed as overseers below ground the supplemental pension is raised

tion from his wages a provision for his old age. To this end the bank receives deposits of the smallest amounts which are increased by the accumulation of interest. With the exception of an amount sufficient to meet the daily payments, all the funds are invested in bonds of the French Government or other obligations guaranteed by the State. All interest thus earned is placed to the credit of the depositors. No deduction is made for the expenses of administration. In case of absolute incapacity to work, as the result of permanent infirmities, the depositor enters immediately into the enjoyment of a pension calculated according to his age and the amount of the payments he has made. Insurance through this institution is purely optional. No engagement, moreover, is entered into by the depositor as regards the amount or frequency of his payments. He can interrupt, diminish, or increase his payments as he desires. A separate account is kept with each depositor. The main use that that is made of this bank is its utilization by large industrial firms and mutual smaller societies to provide for the insurance of their employees or members.

from 3 to 4 francs (58 to 77 cents), and for those employed above ground from 1½ to 2 francs (29 to 39 cents). For married workingmen living with their wives the supplemental pension is doubled.

Provision is also made in all cases for the payment of pensions to widows of workingmen. Transitory provisions make special arrangements for workingmen already in the employment of the company but whose ages prevent them from acquiring pensions according to the regular rates provided in the new regulation.

The most important and at the same time admirable provision of the regulation is that whereby the service of the old-age pensions proper is entirely removed from the control of the company. There is thus absolutely no forfeiture principle. Each workingman knows exactly where he stands as regards his ultimate right to a pension, and feels furthermore that such pension is in no way dependent upon his remaining in the service of the company. Independence is thus not sacrificed to the slightest extent.

Adherence to these regulations was purely optional. Ninety-five per cent of the workingmen, however, recognized the great advantages offered to them and signified their approval. The following table shows the results of the efforts of the company for pensioning its employees, both for the years immediately preceding the adoption of the new plan and for the years succeeding, including 1893. The table following this gives the ages of all pensioners of the company on March 15, 1894.

PENSIONERS AND EXPENDITURES FOR PENSIONS OF THE COAL MINING COMPANY OF ANZIN, 1883 TO 1893.

Year.	Pensions to old employees.			Pensions to widows of employees.			Amount paid by company to National Bank for Old-Age Pensions.	Total amount expended by company for pensions.
	Pensioners.	Total pensions.	Average pension.	Pensioners.	Total pensions.	Average pension.		
1883.....	712	\$25,490.41	\$35.80	651	\$13,426.80	\$20.62	.....	\$38,917.21
1884.....	794	28,431.50	35.81	621	13,417.29	21.61	.....	41,848.79
1885.....	1,098	39,729.10	36.18	633	13,687.98	21.62	.....	53,417.08
1886.....	1,131	41,733.51	36.90	664	14,468.02	21.79	.....	56,201.53
1887.....	1,168	43,339.56	37.10	684	14,714.28	21.51	\$5,899.82	63,953.66
1888.....	1,253	47,923.08	38.24	686	14,857.83	21.66	20,926.55	83,707.46
1889.....	1,279	49,090.82	38.38	725	15,654.84	21.59	26,023.73	90,769.39
1890.....	1,295	49,571.30	38.27	740	15,961.95	21.57	31,436.81	96,970.06
1891.....	1,302	50,746.14	38.97	787	16,616.28	21.11	55,938.73	123,301.15
1892.....	1,368	53,452.52	39.07	804	17,072.34	21.23	55,736.86	126,261.72
1893.....	1,379	54,740.06	39.69	827	17,400.31	21.04	56,775.39	128,915.76

AGE OF EMPLOYEES PENSIONED BY THE COAL MINING COMPANY OF ANZIN, MARCH 15, 1894.

Age.	Num-ber.	Age.	Num-ber.	Age.	Num-ber.	Age.	Num-ber.	Age.	Num-ber.	Age.	Num-ber.	Age.	Num-ber.
22	1	37	1	47	2	56	58	65	56	74	20	83	5
25	2	38	2	48	7	57	69	66	44	75	13	84	3
27	2	40	2	49	3	58	86	67	60	76	11	85	1
30	1	41	2	50	12	59	75	68	47	77	12	86	1
31	1	42	1	51	30	60	70	69	44	78	8	87	3
33	2	43	6	52	27	61	54	70	41	79	12	88	1
34	2	44	3	53	41	62	65	71	25	80	5	89	1
35	1	45	2	54	58	63	66	72	22	81	7		
36	1	46	1	55	59	64	75	73	27	82	4	Total.	1,363

In explanation of the first of these two tables, it should be noted that the average amount of the pensions shown indicates only the pensions granted by the company as reward for long service. In addition to this, since 1887 the workingmen have been acquiring a pension through the National Bank for Old-Age Pensions. Thus, in the year 1893, the company paid for this purpose the sum of 294,173 francs (\$56,775.39); in connection with this the workingmen have to pay an equal amount; the total amount paid into the national bank being, therefore, 588,346 francs (\$113,550.78).

The year 1893 practically closes the record of voluntary individual efforts on the part of mine owners to pension their old employees or their widows.

Mention has been made of a general law concerning old-age pensions for mine employees. This law was passed June 29, 1894, and by it the insurance of all mine employees was made obligatory.

According to it each mine operator was required to pay into the National Bank for Old-Age Pensions, or into a special institution created by the operator for his own employees or in connection with other mine operators for the mutual insurance of their employees, the organization of which had received the authorization of the Government, on behalf of each workingman the wages of whom did not exceed 2,400 francs (\$463.20) a year, a sum equal to 4 per cent of the latter's wages, half of which was to be deducted from the wages of the workingman and the other half be borne directly by the operators. These payments then were devoted to the ultimate acquisition of an old-age pension according to the regular rules of the National Bank for Old-Age Pensions.

For the company of Anzin and its employees, it will be noticed that the law made necessary but few changes. The company was already making such payments to the amount of 3 per cent of its employees' wages, in addition to the supplemental pensions for length of service. The general effect of the law was to make obligatory upon all mine owners the adoption of a system that had been practiced at Anzin since 1887.

The obligation to maintain aid societies for the aid of sick and injured workingmen was likewise imposed upon mine operators by this law, but this provision should be considered in connection with the account of the mutual aid societies of Anzin that follows.

MUTUAL AID SOCIETIES.

A temporary relief organization is a necessary complement of any system of old-age and invalidity insurance. The latter makes provision for the time when employees, through old age or disability, are unable longer to earn wages. The former provides for temporary incapacity or misfortune. Experience has demonstrated that it is advisable to keep these two services distinct from each other. The basis of a pen-

sion fund, resting as it does on calculations of probabilities according to mortality tables, ages of employees, etc., should be complicated as little as possible by other indeterminate charges.

To meet this want of mutual assistance in cases of sickness and other troubles, there has been developed in almost every commune and village of France one or more mutual aid societies (*sociétés de secours mutuels*). Their organization and operation afford a study of the most interesting institution that has been developed in France for improving the condition of the laboring classes. They are to France what the building associations are to America. Though ministering to different ends, they are similar to our building associations in that they are organized and managed for the most part by the workingmen themselves. They bring the workingmen together for purposes of mutual aid and action; their methods of operation and control are simple, and their expenses of administration are reduced to a minimum. M. Lafitte, an authority on all matters relating to mutual aid societies, thus tersely states their purposes (*a*): "Mutual aid societies have for their essential objects: To furnish to their members when sick medical attendance and necessary medicines; to pay to them a daily sum of money during their sickness; to secure to them a small pension after they have reached a certain age, and to defray the expense of a suitable burial on their death." To secure this each member pays into the funds of the society a fixed annual sum, as dues, usually divided into monthly or weekly payments.

These societies have had an existence in France for over fifty years. The central Government has encouraged their organization through the enactment of general laws, and a general control is exercised over their operations through a special bureau created in 1852 under the Department of the Interior. Annual reports are made by the societies to this bureau, and it in turn issues an annual report on their operations during the year. The important part that these societies play in the life of the workingmen of France is shown in the following statistics of their number and amount of business for 1892, the latest year obtainable:

Number of societies.....	9, 662
Increase during year	248
Number of members	1, 503, 397
Increase during year.....	31, 112
Receipts during year.....	\$6, 052, 520. 53
Increase	138, 846. 90
Assets at end of year.....	37, 816, 056. 58
Increase during year.....	2, 383, 582. 23

The study of the whole question of mutual aid societies in France would be an interesting one. Here only a brief statement of their general character and importance has been given in order that the purpose of the societies that exist at Anzin may be understood.

a Essai d'une Théorie Rationnelle des Sociétés de Secours Mutuels, Paris, 1892.

Seven mutual aid societies have been organized under the patronage of the company. The constitutions of all of these societies are practically identical.

Briefly stated, each constitution provides for the organization of the workingmen into a society by which, for the trifling payment of 50 centimes ($9\frac{65}{100}$ cents) a month, the members receive the right in case of sickness or accident to free medical attendance and medicines, to a benefit of 1 franc ($19\frac{3}{10}$ cents) during each day of their sickness, if such sickness is not more than one year in duration, and to various other relief, such as burial expenses, etc. To accomplish this, however, the receipts of the society from dues have to be largely supplemented from other sources. The company, therefore, turns over to it the amount of all fines collected by it for the infraction of any of its regulations, a practice that removes the criticism often made that fines are levied for selfish purposes, and also makes to it liberal gifts when the receipts of the society are not sufficient to meet its obligations.

In the following tables the combined operations of the seven societies at Anzin during the eleven years from 1883 to 1893 are presented. From the first table it will be seen that the number of employees who are members of the societies is now over 8,000, or 94 per cent of those eligible for membership. The increasing percentage from year to year of those eligible for membership who have become members shows an increasing appreciation of the benefits that the societies offer.

In the table of receipts and expenditures two points are worthy of special attention. The first is the very small percentage that the expense of administration is of the total expenditures of the societies, the average for the period covered being less than 2 per cent. The second is the policy of creating as rapidly as possible a permanent fund, so that the societies may always have on hand an emergency fund and at the same time profit from interest on their investments. In this connection there should be noted a feature that applies to all workingmen's institutions whether organized at Anzin or elsewhere in France, and that is, that a system of mutual assessment in case of sickness or death has never found the slightest favor with the workingmen. They desire to know in all cases the exact amount of their obligations. In other words, they prefer the system of fixed dues. There are no details of the table that are worthy of special comment. The growth of receipts and expenditures has been normal, corresponding to the growth in membership.

MEMBERSHIP OF MUTUAL AID SOCIETIES AT ANZIN AND DAYS OF SICKNESS AND EXPENDITURE PER ACTIVE MEMBER, 1883 TO 1893.

Year.	Honorary members.	Active members.	Employees eligible but not members.	Employees eligible for membership.	Per cent of active members of eligible employees.	Days of sickness.		Expenditure per active member.
						Total.	Per active member.	
1883.....	59	2,572	5,208	7,780	33	26,751	10.4	\$1.78
1884.....	268	3,170	4,259	7,429	43	28,097	8.9	1.55
1885.....	473	4,670	2,630	7,300	64	40,932	8.8	2.00
1886.....	455	α5,940	α1,627	α7,573	78	60,623	10.2	2.59
1887.....	482	6,296	1,352	7,648	82	63,590	10.1	2.57
1888.....	487	6,544	1,126	7,670	85	74,162	11.3	2.74
1889.....	539	6,902	933	7,835	88	75,498	10.9	2.74
1890.....	525	7,605	1,044	8,649	88	97,202	12.8	3.21
1891.....	573	8,052	1,076	9,128	88	89,019	11.6	2.73
1892.....	551	α8,199	α590	α8,800	93	95,851	11.7	2.99
1893.....	530	8,385	541	8,926	94	114,728	13.7	3.71

α The addition of the active members and employees eligible but not members does not produce the total eligible employees here shown. The figures are given, however, as reported to the Department.

RECEIPTS AND EXPENDITURES OF MUTUAL AID SOCIETIES AT ANZIN, 1883 TO 1893.

Items.	1883.	1884.	1885.	1886.	1887.
RECEIPTS.					
Balance on hand Jan. 1.....	\$1,930.22	\$2,275.83	\$2,918.62	\$6,537.09	\$8,338.72
Dues of honorary members.....	68.32	354.35	683.41	732.63	799.40
Dues of active members.....	4,796.44	4,975.16	8,792.16	12,102.21	12,699.74
Fines turned over by company to the societies.....		1.16	1,700.95	2,527.21	2,241.57
Gifts from the company.....		19.30	1,042.20	1,166.68	1,299.76
Entrance fees.....	7.29	27.84	146.49	247.67	128.25
Interest on funds invested.....	35.73	34.91	119.90	93.35	189.14
Miscellaneous receipts.....	14.73	140.14	494.69	313.33	183.79
Total.....	6,852.73	7,828.69	15,898.42	23,720.17	25,880.37
EXPENDITURES.					
Expenses of administration.....	59.25	86.72	136.32	238.93	259.10
Aid to sick members.....	4,392.59	4,560.98	7,025.30	11,033.23	12,109.74
Expenses for funerals.....	85.69	123.33	183.35	217.90	186.63
Aid to widows, orphans, and families in need.....	34.74	73.34	1,871.13	3,139.43	3,142.85
Other expenses.....	4.63	65.70	145.23	751.96	480.23
Balance on hand Dec. 31.....	2,275.83	2,918.62	6,537.09	8,338.72	9,701.82
Total.....	6,852.73	7,828.69	15,898.42	23,720.17	25,880.37

Items.	1888.	1889.	1890.	1891.	1892.	1893.
RECEIPTS.						
Balance on hand Jan. 1.....	\$9,701.82	\$9,455.45	\$10,807.56	\$8,903.26	\$11,152.59	\$13,004.34
Dues of honorary members.....	710.14	720.28	681.00	833.95	819.96	774.99
Dues of active members.....	13,160.96	13,748.74	15,243.39	16,793.80	18,117.10	17,856.94
Fines turned over by company to the societies.....	2,386.52	2,195.65	2,439.78	3,103.62	2,553.99	6,795.87
Gifts from the company.....	856.92	2,528.69	3,396.80	1,779.46	4,272.85	4,517.38
Entrance fees.....	135.97	128.92	173.00	91.24	103.83	46.90
Interest on funds invested.....	264.81	271.27	236.77	264.86	341.07	290.66
Miscellaneous receipts.....	187.62	649.22	350.76	1,375.80	136.98	984.83
Total.....	27,404.76	29,698.22	33,329.06	33,145.99	37,498.37	44,271.91
EXPENDITURES.						
Expenses of administration.....	247.81	352.19	385.62	510.88	520.45	643.58
Aid to sick members.....	13,304.21	13,267.50	17,940.64	15,427.55	17,451.74	21,144.21
Expenses for funerals.....	354.73	254.10	334.08	454.52	429.04	825.07
Aid to widows, orphans, and families in need.....	3,320.47	4,548.26	5,220.17	3,976.67	5,666.88	6,729.94
Other expenses.....	722.09	468.61	545.29	1,623.78	425.92	1,769.02
Balance on hand Dec. 31.....	9,455.45	10,807.56	8,903.26	11,152.59	13,004.34	13,160.09
Total.....	27,404.76	29,698.22	33,329.06	33,145.99	37,498.37	44,271.91

The enactment of the law of June 29, 1894, necessitated a number of changes in the organization of these societies. The law made the organization of aid societies for the relief of employees in cases of sickness and accidents obligatory upon all mine operators. While it provided that wherever such societies were already in existence it would not be necessary to organize new societies, it required that they should be reorganized to such an extent as to comply with the provisions of the law. The chief innovation required was that concerning the sources of receipts. While heretofore the company had voluntarily contributed to the resources of the societies through the turning over to them of the product realized from fines, and through gifts from time to time, it was now rendered obligatory upon it to contribute toward the maintenance of the fund to an equal extent with the workingmen. This was in accordance with the provision of the law, which provided that the receipts of such societies should come from the following five sources: (1) A deduction from the wages of each employee, the amount of which is determined by the administration of the society and which can not exceed 2 per cent of his wages; (2) an equal payment by the mine operator; (3) subsidies granted by the State; (4) gifts and legacies, and (5) the product of fines for the infraction of certain regulations relating to the conduct of work below ground.

The law further made certain general provisions regarding the nature of the relief to be granted, for the government of the society through the mutual participation of the members and of representatives of the mine owners, etc. These sections, however, left a great deal of liberty to the individual societies and necessitated but few changes in societies already in existence.

COOPERATIVE DISTRIBUTIVE SOCIETY.

The organization of cooperative stores in the mining centers of France has, in a number of instances, achieved notable success. At Anzin a society was organized as early as 1865, and it is thus one of the first cooperative distributive societies created in France. Its creation was the direct result of the influence of the success of the Rochdale Pioneers in England. Operations commenced in 1865, but the society, properly speaking, had a legal existence only after December 10, 1867, when it took advantage of the law of July 24-29, 1867, to become a legal corporation.

The organization of the society is that of a joint stock company, but on such a basis that all speculative interest in the stock is eliminated. Each member of the society is required to own one, and can not own more than two shares of stock. The value of the shares of stock is 50 francs (\$9.65) each. The society is absolutely independent of control by the company of Anzin. Membership is strictly limited to employees of the company, and only members can trade at the stores. The object of the society has always been to buy merchandise and the

usual articles consumed by miners at wholesale prices, and to sell them to the members in such a way as to bring the purchasers in direct relation with the producer and eliminate as far as possible the profits of the middleman. Largely with the idea of encouraging savings, it has been the steady policy of the society to fix the prices of articles as nearly as possible at the rate charged in neighboring retail stores, great care being taken, however, to in no case exceed those prices. As, with rare exceptions, supplies are purchased directly from the producers without the intervention of the middleman, a considerable profit is accumulated at the end of each year for distribution among the members. After the payment of necessary running expenses the profits remaining go first to the payment of a 5 per cent dividend on the stock, and the residue to purchasers in proportion to the value of their purchases during each year.

From the start the society has developed rapidly. The two following tables show from year to year, since organization, the membership of the society, the amount of capital, the amount of dividends paid, the total value of sales, the amount of profits earned, and the proportion that this latter bears to the value of all sales:

MEMBERS, CAPITAL, AND DIVIDENDS OF THE COOPERATIVE DISTRIBUTIVE SOCIETY OF ANZIN, 1866 TO 1894.

Year.	Members.	Capital.	Divi- dends paid.	Year.	Members.	Capital.	Divi- dends paid.
1866.....	577	\$5,568.05	\$96.04	1881.....	2,544	\$24,549.60	\$1,144.45
1867.....	785	7,575.25	148.43	1882.....	2,625	25,331.25	1,206.16
1868.....	1,180	11,387.00	360.02	1883.....	2,373	22,899.45	1,249.92
1869.....	1,357	13,095.05	654.75	1884.....	2,683	25,890.95	1,223.91
1870.....	1,441	13,905.65	695.28	1885.....	2,928	28,255.20	1,303.94
1871.....	1,630	15,729.50	786.48	1886.....	3,021	29,152.65	1,396.01
1872.....	1,839	17,746.35	835.73	1887.....	3,043	29,364.95	1,412.52
1873.....	2,123	20,486.95	791.50	1888.....	3,123	30,136.95	1,441.57
1874.....	2,186	21,094.90	935.15	1889.....	3,227	31,140.55	1,482.47
1875.....	2,159	20,834.35	962.02	1890.....	3,319	32,028.35	1,535.72
1876.....	2,204	21,268.60	987.82	1891.....	3,386	32,674.90	1,574.28
1877.....	2,127	20,525.55	978.62	1892.....	3,497	33,746.05	1,605.87
1878.....	2,154	20,786.10	978.86	1893.....	3,629	35,019.85	1,684.19
1879.....	2,238	21,596.70	1,016.28	1894.....	3,760	36,284.00	1,753.98
1880.....	2,386	23,024.90	1,077.13				

SALES AND PROFITS OF THE COOPERATIVE DISTRIBUTIVE SOCIETY OF ANZIN,
1866 TO 1895.

[It will be noticed that the profits distributed each year prior to 1872 represent a higher per cent of the value of sales than is indicated in the table. The figures are given, however, as published by the company.]

Year.	Total value of sales.	Profits distributed among purchasers.		Year.	Total value of sales.	Profits distributed among purchasers.	
		Amount.	Per cent of total sales.			Amount.	Per cent of total sales.
1866 { 1st half...	\$13,706.88	\$1,588.12	8	1881 { 1st half..	\$214,046.00	\$25,685.52	12
{ 2d half....	24,617.55	3,001.08	8	{ 2d half... 225,522.22		27,062.66	12
1867 { 1st half...	31,447.31	3,817.62	9	1882 { 1st half..	229,626.55	27,555.19	12
{ 2d half....	35,740.90	4,433.96	9	{ 2d half... 219,201.30		26,304.16	12
1868 { 1st half...	47,698.73	5,823.44	9	1883 { 1st half..	224,236.80	26,908.42	12
{ 2d half....	64,818.93	7,054.75	7½	{ 2d half... 231,009.04		27,721.08	12
1869 { 1st half...	66,449.04	8,367.33	9	1884 { 1st half..	224,487.02	29,183.31	13
{ 2d half....	69,696.44	9,245.07	9	{ 2d half... 182,050.66		25,487.09	14
1870 { 1st half...	77,497.93	10,034.51	9	1885 { 1st half..	187,059.38	24,317.73	13
{ 2d half....	82,056.75	9,296.22	8	{ 2d half... 195,318.89		25,391.46	13
1871 { 1st half...	74,988.49	9,825.94	9	1886 { 1st half..	213,454.34	27,749.07	13
{ 2d half....	92,214.59	12,249.07	9	{ 2d half... 213,001.66		27,690.22	13
1872 { 1st half...	140,716.18	14,071.62	10	1887 { 1st half..	214,756.20	26,307.63	12½
{ 2d half....	134,333.59	16,119.98	12	{ 2d half... 217,819.39		28,316.52	13
1873 { 1st half...	152,517.72	18,301.96	12	1888 { 1st half..	207,302.22	26,949.29	13
{ 2d half....	174,434.37	20,932.10	12	{ 2d half... 216,531.41		28,149.08	13
1874 { 1st half...	220,550.90	22,055.09	10	1889 { 1st half..	228,109.11	29,654.18	13
{ 2d half....	191,832.25	19,183.23	10	{ 2d half... }			
1875 { 1st half...	168,556.54	16,855.66	10	1890 { 1st half }	438,850.06	57,050.51	13
{ 2d half....	168,657.06	16,865.71	10	{ 2d half. }			
1876 { 1st half...	179,454.40	17,945.44	10	1891 { 1st half }	460,811.35	59,905.47	13
{ 2d half....	181,327.32	18,132.73	10	{ 2d half. }			
1877 { 1st half...	182,211.12	18,221.11	10	1892 { 1st half }	466,137.66	62,904.41	{ 13
{ 2d half....	175,245.52	17,524.55	10	{ 2d half. }			{ 14
1878 { 1st half...	177,767.48	17,776.75	10	1893 { 1st half }	447,272.11	67,090.81	15
{ 2d half....	168,130.21	18,494.32	11	{ 2d half. }			
1879 { 1st half...	178,919.95	19,681.19	11	1894 { 1st half }	448,248.90	67,237.33	15
{ 2d half....	176,254.03	21,150.48	12	{ 2d half. }			
1880 { 1st half...	193,371.19	23,204.54	12	1895 { 1st half.. }	447,555.06	67,133.26	15
{ 2d half....	212,044.84	23,324.93	11				
Total					10,209,665.54	1,266,332.90	12½

During this period, therefore, profits to the amount of 6,561,310.34 francs (\$1,266,332.90) have been distributed among the members, or an amount equal to 12½ per cent of the total value of sales. In addition to this all the profits have not been distributed. Considerable sums have been devoted to the acquisition of property in which the business is carried on. The society has constructed commodious quarters for its central store and for three of its most important branches, all of which are now completely paid for. The operating expenses have been about 4 per cent of the cash receipts on sales.

Though the company has interfered in no way in the management of the society, it has looked with great favor on its operations. The effect on the morale of their employees has not been the least of its advantages. Its method of division of profits has furnished a means to the workingman to accumulate savings that he would not have had under the ordinary system of trading at retail stores. The rules of the society absolutely forbidding sales on credit have prevented its members from running in debt. Its meetings and the necessary control over the administration of the affairs of the society have been of real educational advantage to them.

MEDICAL SERVICE.

The company of Anzin has practically assumed the entire burden of the care of its employees and to some extent of their families in cases of accidents or sickness. By direction of the administration in 1867, aid of four kinds was ordered to be granted in such cases, viz, medical attendance, medicines, food for the sick, such as bouillon and wine, and pecuniary aid.

A sharp distinction is made between the different services, and especially between the workingmen employed below and those employed above ground, as regards the amount of assistance granted. A special care and solicitude is exercised over the miners proper and the other employees working below ground. In the case of the former the granting of medical assistance is extended to their wives, children, and parents, if living with them at the time. To workingmen employed above ground medical attendance is not extended to the other members of the family, though medical supplies are issued for their use. Medical attendance and medical supplies are also granted to all workingmen on the pension roll, provided their individual pensions do not exceed 1,000 francs (\$193) per annum. Regarding the granting of pecuniary aid, the company has issued the following regulations and tariff:

First class.—In cases of severe wounds, such as fracture of the femur, tibia, or humerus, accidents to the head affecting the brain, amputation of limb as the result of an accident, serious burns from hot water or explosion of fire damp, or wounds causing the loss of one or both eyes, there will be granted per fortnight to married workingmen, 30 francs (\$5.79); to unmarried workingmen, other than putters, 15 francs (\$2.89½), and to putters 10 francs (\$1.93).

Second class.—In case of fracture of the clavicle without internal lesion, simple fracture of the forearm, mutilation of the fingers or toes, slight burns, or injuries endangering the sight, to married workingmen, 20 francs (\$3.86); to unmarried workingmen, other than putters, 10 francs (\$1.93), and to putters, 6 francs (\$1.16).

Third class.—In case of slight injuries of any kind, to married workingmen, 10 francs (\$1.93); to unmarried workingmen, other than putters, 5 francs (96½ cents), and to putters, 3 francs (58 cents).

For the administration of the health service the company has in its employ eleven physicians, each of whom, with the exception of one, who devotes himself to diseases of the eye, has his particular district. Each has a consultation room, where, during certain hours, he receives all who are able to come to him. The other sick are cared for in their own homes, and a horse and carriage is furnished each physician with which to make his visits.

The expenditures entailed by the maintenance of this medical and relief system is given in a table on page 255.

SAVINGS BANK.

But a few words will be required concerning the encouragement by the company of savings among its employees. Previous to the passage of the act of 1881 creating a national postal savings bank, the company of Anzin, in common with other industrial concerns, stimulated in every way the spirit of saving among its employees. To this end the company created, in 1869, a savings bank in which its employees were encouraged to deposit their savings and upon which they received interest at the rate of 5 per cent for amounts under 2,000 francs (\$386) and 4 per cent for amounts over that sum. The national savings bank created in 1881 offered all necessary inducements and guaranties of security. The company therefore reduced the rate of interest paid to 3 per cent, the same as that paid by the Government, and ceased to encourage deposits in its own bank. Thus the number of depositors, that had reached in 1877 a total of 1,431, with deposits of 1,940,011.77 francs (\$374,422.27), has now sunk to less than one-third that number and the amount of deposits has been correspondingly decreased.

EDUCATION.

The company first began to occupy itself with the provision of school facilities for the children of its employees in 1873. Previous to 1882, the year in which the law providing for free public instruction was passed, the efforts of the company represented a considerable expense. It erected numerous infant and primary schools and, in connection with the latter, workshops for manual training. At the present time, however, it possesses actually but one school, and its total expenditure for schooling in 1888 was 31,875.45 francs (\$6,151.96), divided as follows:

Subsidies to teachers and infant schools	\$4, 046. 14
Fuel for schools.....	134. 02
Prizes in the form of books and savings-bank deposits.....	142. 82
Maintenance of its own school.....	1, 828. 98
Total.....	6, 151. 96

In addition it maintains a special advanced school conducted by its own engineers for the purpose of educating skilled workingmen, the pupils of which are taken from among the best scholars of the primary schools. The company also pays the tuition and board of two of its young workingmen at the school for boss miners at Douai (École des Maîtres-mineurs de Douai).

Four churches have also been erected and are now owned by the company. All are consecrated to the Catholic faith.

MISCELLANEOUS AID TO WORKINGMEN.

In addition to the various ways for aiding workingmen which have been enumerated, the company contributes to their support in a number of ways that can not well be classified. Of these, the principal items

of expense are the furnishing of fuel free to all of its employees, the furnishing of the first working suit to its miners when they commence work below ground, the granting of 50 centimes ($9\frac{65}{100}$ cents) per day to wives of workingmen during the latter's period of military service, to which is added 25 centimes ($4\frac{83}{100}$ cents) per day for each child they may have, the aiding of orphans until they are of an age to commence work, and the aiding of workingmen generally and their families in cases of distress.

The expenditures of the company for these purposes, as well as for the maintenance of its medical service for the eleven years, 1883 to 1893, inclusive, are given in the following table:

EXPENDITURES OF THE COAL MINING COMPANY OF ANZIN FOR MEDICAL SERVICE, AID, ETC., 1883 TO 1893.

Year.	Medical service (salaries of physicians, medicines, medical supplies, etc.).	Sick and injured.	Old employees, their widows or parents, and orphans.	Employees in need.	Wives and children of employees doing military service.	First working suits, grants to mothers on first communion of their children, etc.	Total expenditures (aid to employees and medical service).	Value of fuel given to employees and pensioners.
1883.....	\$25,908.70	\$11,484.08	\$14,019.78	\$1,397.25	\$1,623.47	\$1,837.57	\$56,270.85	\$87,764.32
1884.....	25,208.13	10,222.69	12,118.64	1,537.88	1,663.61	1,592.44	52,343.39	66,923.60
1885.....	22,338.24	10,009.18	14,240.28	4,447.32	1,399.11	1,042.39	53,476.52	59,845.48
1886.....	24,195.44	11,474.29	11,163.26	2,928.20	1,758.23	1,243.38	52,762.80	63,679.00
1887.....	23,710.02	12,375.26	10,125.12	3,200.76	1,441.27	1,287.43	52,139.86	69,763.71
1888.....	23,946.23	12,819.24	10,185.97	2,696.99	1,640.02	1,208.72	52,497.17	69,312.09
1889.....	24,285.21	13,856.41	10,242.93	4,406.18	1,270.95	1,288.70	55,350.38	71,991.70
1890.....	27,439.79	15,967.15	9,672.24	5,426.46	1,186.28	1,314.33	61,006.25	76,544.96
1891.....	28,643.96	14,790.26	10,211.20	4,430.58	1,560.65	1,376.40	61,013.05	81,069.26
1892.....	30,208.12	17,708.19	9,749.06	2,270.74	2,468.61	1,210.42	63,615.14	84,366.09
1893.....	34,737.99	20,626.65	10,458.47	3,907.96	1,188.97	1,386.36	72,306.40	81,249.91

RECAPITULATION OF THE EXPENDITURES OF THE COAL MINING COMPANY OF ANZIN FOR THE BENEFIT OF ITS EMPLOYEES.

A survey has been made in considerable detail in the foregoing pages of all of the various institutions in which the workingmen of Anzin participate. Concerning the general question of workingmen's institutions it is important to know what is the total expense that the maintenance of these institutions entails upon the company, what pecuniary advantage the sum total of these efforts confers upon the workingmen, and what relation this latter bears to the amount they receive in the way of wages. A recapitulation of the total expenditures of the company for the benefit of its employees has therefore been made in such a way as to bring out these facts for the eleven years, 1883 to 1893.

Following this table is another one similarly constructed, giving the same information for a number of the most important coal mining companies other than that of Anzin. The data for this table were taken from a work entitled *L'Organisation du Travail dans les Mines et Particulièrement dans Les Houillères*, by Charles Ledoux, engineer in chief of mines, Paris, 1890, and relate to the year 1888.

From the second table it is evident that the company of Anzin by no means holds a unique position in respect to the creation by it of workmen's institutions. The existence of institutions such as have been described for Anzin is almost universal among the large coal mining companies of France. Wherever material for a comparison of conditions at Anzin with those existing in other mining centers of France could be obtained, the original statement, that in choosing Anzin for a detailed study a typical center had been selected, seems to be justified.

EXPENDITURES OF THE COAL MINING COMPANY OF ANZIN FOR THE BENEFIT OF EMPLOYEES, BY OBJECTS OF EXPENDITURE, 1883 TO 1893.

Year.	Expenditures for—						Total expenditures.	Expenditures per employee.	Per cent of expenditures of earnings.
	Pensions.	Housing.	Schools.	Medical service.	Free fuel.	Direct pecuniary and other aid.			
1883	\$38,917.21	\$45,159.70	\$8,260.91	\$25,908.70	\$87,764.32	\$30,362.15	\$236,372.99	\$17.34	7.98
1884	41,848.79	44,763.66	7,169.10	25,208.13	66,923.60	27,135.26	^a 225,665.53	19.55	9.99
1885	53,417.08	44,349.28	4,750.29	22,338.24	59,845.48	31,138.28	215,838.65	20.40	10.12
1886	56,201.53	42,324.80	5,255.30	24,195.44	63,679.00	28,567.36	220,223.43	19.35	9.55
1887	63,953.66	42,878.19	5,194.55	23,710.02	69,763.71	28,429.84	233,929.97	20.55	9.99
1888	83,707.45	43,193.66	5,223.51	23,946.23	69,312.09	28,550.94	253,933.88	22.05	10.70
1889	90,769.40	43,125.42	5,160.57	24,285.21	71,991.70	31,065.17	266,397.47	22.58	10.52
1890	96,970.05	42,401.23	5,121.47	27,439.79	76,544.96	33,566.46	282,043.96	22.53	9.56
1891	123,301.15	43,284.97	5,342.35	28,643.96	81,069.26	32,369.09	314,010.78	24.63	10.08
1892	126,261.71	42,221.30	5,452.11	30,208.12	84,366.09	33,407.02	321,916.35	25.61	10.74
1893	128,915.76	42,179.65	5,447.07	34,737.99	81,249.91	37,568.41	330,098.79	26.01	10.84
Total...	904,263.79	475,881.86	62,377.23	290,621.83	812,510.12	342,159.98	^a 2,900,431.80	.....	.....
Average for the 11 years.	82,205.80	43,261.99	5,670.66	26,420.17	73,864.55	31,105.45	^b 263,675.62	.....	.....

^a This total is \$12,616.99 more than the sum of the items. The explanation is not known. The figures are given as reported to the Department.

^b See preceding note.

EXPENDITURES OF VARIOUS COAL MINING COMPANIES IN FRANCE FOR THE BENEFIT OF EMPLOYEES, BY OBJECTS OF EXPENDITURE, 1888.

Name of company.	Expenditures for—						Total expenditures.	Expenditures per employee.	Per cent of expenditures of earnings.
	Pensions.	Housing.	Schools.	Medical service.	Free fuel.	Direct pecuniary and other aid.			
Anzin	\$83,707.45	\$43,193.66	\$5,223.51	\$23,946.23	\$69,312.09	\$28,550.94	\$253,933.88	\$22.05	10.70
Douchy	8,051.60	12,886.94	227.16	2,688.77	9,919.10	7,017.55	40,791.12	29.92	13.00
Liévin	181.03	35,291.63	5,268.38	5,519.55	11,904.86	7,786.69	65,952.14	30.02	15.00
Bessèges	8,370.17	.....	7,561.91	7,847.96	20,059.77	22,887.32	66,727.13	28.73	10.92
Blanzey	19,251.46	30,176.03	33,701.11	7,776.97	61,716.86	50,554.56	203,176.99	38.28	10.80
Courrières ...	3,849.76	21,616.00	^a 5,450.38	8,479.40	24,704.00	7,000.57	71,100.11	20.07	9.00
Béthune .....	.....	.....	.....	.....	.....	.....	96,500.00	31.46	16.00
Naeux .....	.....	.....	.....	.....	.....	.....	114,935.36	28.14	.....
Lens (^b) .....	.....	.....	.....	.....	.....	.....	158,453.00	29.92	15.00
Montrambert .....	.....	.....	.....	.....	.....	.....	40,144.00	18.34	8.00
Roche-la-Mo- lière et Fir- miny .....	.....	.....	.....	.....	.....	.....	43,260.18	16.02	7.00

^a This includes contributions for religious purposes.

^b The figures given are for 1885.

From the first of these tables it is possible to follow in a very clear way the progress of institutions and work undertaken by the company of Anzin for the benefit of its employees. Taken in its entirety, the

average expenditure per member has steadily increased. From a sum of 89.83 francs (\$17.34) in 1883 the amount increased every year, with the exception of 1886, until it stood at 134.77 francs (\$26.01) in 1893.

If the table be still further examined in order to determine the particular items of expenditure that are responsible for this increase, it will be seen that the item of pensions accounts for the entire augmentation. Pensions have increased from 201,643.57 francs (\$38,917.21) in 1883 to over three times that sum, or 667,957.30 francs (\$128,915.76) in 1893. This fact is but illustrative of the direction toward which more than any other the attention of employers and employees alike throughout France has been turned during the past decade for the improvement of the condition of the working classes. The one great aim of those trying to better the condition of these classes is to insure that in some way or other provision shall be made for workingmen after they have become old and incapacitated for labor. At the present time very nearly a consensus of opinion has been reached that this can only be accomplished through an insurance system to be maintained through the mutual efforts of employers and their employees.

The final column of this table has been introduced in order to show, from year to year, the relative value of these supplemental advantages as compared with the amount the workingmen receive in the way of wages, strictly speaking. It is a matter of considerable importance in considering the whole question of workingmen's institutions, to determine whether with their development the tendency is for the workingmen to receive a larger or smaller portion of their reward in this indirect way, or directly, through the payment of cash wages. The information here afforded is direct upon this point. Though the absolute value of the supplementary advantages per member has increased from 89.83 francs (\$17.34) in 1883 to 134.77 francs (\$26.01) in 1893, this represents but a slightly greater percentage of wages in later than in earlier years. In the year 1883 the percentage of supplementary advantages of wages, 7.98, seems to have been abnormally low. In 1884, however, it was 9.99, or less than 1 per cent less than it was ten years later, in 1893, when the percentage of supplementary advantages of wages was 10.84.

CONCLUSION.

A position has now been gained from which it is possible to make a general survey of the life of miners and other mine employees at Anzin. Until 13 years of age the future workingman attends a school supported by the joint efforts of the State and the mining company of Anzin. When 13 he enters the employ of the company, and is assigned to light surface work, such as sorting or washing coal. In the course of a few years he is drafted below ground and commences his actual life as a miner. Meanwhile he has become a member of a mutual aid society, from which he is entitled to receive certain benefits in case of sickness or accident. If at all industrious he can

commence the acquisition of a house and a garden of sufficient size to allow him to raise vegetables for his own consumption; and in 15 or 20 years, or when he is 35 or 40 years of age, he will have made all the necessary payments and have become the absolute owner of the property. If a miner proper his average daily wages are 5.45 francs (\$1.05) per day, or 1,510.15 francs (\$291.46) per year; if not, his wages will vary from an average of 4.84 francs (93 cents) to 3.46 francs (67 cents) per day, or 1,371.81 francs (\$264.76) to 1,104.94 francs (\$213.25) per year, according to whether he is employed below or above ground. His supplies he will purchase at the stores of the cooperative society of which he is a member, and on which he receives at the end of each half year a participation in profits to the extent of 12 or 13 per cent of the value of his purchases. Fuel, a no inconsiderable item of expense, he receives free from the company.

In the meantime, through payments of an amount equal to 2 per cent of his wages to the National Bank for Old-Age Pensions, the company making payments of a like amount, he is acquiring the right to a modest pension after he has reached the age of 50 years for the remainder of his life. If, however, as is frequently the case, he does not desire to cease work, he can postpone the enjoyment of his pension, in which case its amount will be considerably increased.

Of all the data available, however, for determining the success of the means employed for improving the condition of workingmen of a particular establishment, those of the stability of employment are, undoubtedly, of the greatest significance. The desire on the part of employers for a stable body of employees has been the inspiration of almost all the institutions created or encouraged by the former for the latter's welfare. As far as such an index is obtainable, statistics of the length of time that workingmen continue in the employment of a company will register the extent to which the advantages there offered are appreciated.

Stability of employment is not only a desirable result; it is indispensable to the continued working of the various institutions that have been described. A slight inspection, for example, of the plans upon which pension funds are organized, or of the conditions which regulate the acquisition of homes by workingmen, shows that without such stability their successful operations would be impossible. It is therefore of prime importance that all available information bearing on this point should be sought.

The most perfect stability is that which corresponds to the case where an establishment recruits its employees from young workingmen who remain in its employ continuously until incapacitated by sickness or old age. The ratio of stability in this case would correspond with the mortality and invalidity table of such workingmen.

The elements involved in the presentation of information concerning stability of employment relate to the ages of employees on commencing

work, the number of years that they have been employed, and the number leaving the service of the establishment and for what reason. Information on all these points has been secured for the mining company of Anzin.

In the six tables that follow are presented all the facts necessary for establishing the stability of the personnel at Anzin. In the main the tables are self-explanatory and call for but little comment. In them is shown a continuity and stability of employment which, under the conditions of modern industry, it would seem almost impossible to exceed. This is the more remarkable when one considers that Anzin is in the center of the greatest coal-mining region of France and in close proximity to the coal mines of Belgium, and it would be easy for a miner to go from mine to mine in search of employment.

By reference to the table on page 231, giving the ages of employees when they commenced work for the company of Anzin, it will be seen that the service of the company is almost exclusively recruited by the engagement of youths under 15 years of age. During the six years from 1888 to 1893, 49.29 per cent of the total number of new workingmen employed were under that age, and if there be omitted those recorded as commencing work between the ages of 20 and 25, as the result of the completion of their terms of military service, the statement can be made that nearly two-thirds of the employees of the company enter its service as children between the ages of 13 and 14 years.

The first three tables that follow show in detail the ages and length of service of all employees. It is important to know their ages, for, as can be seen in the present case, practically all of those who have been employed but a short time are so youthful that their longer employment would be impossible.

The fourth table is in the nature of a summary, with the element of age, however, omitted. It shows that 12.17 per cent of all employees below ground have been employed 30 years, 27.63 per cent 20 years, and 60.10 per cent 10 years or over. The percentages of all employees are 12.32, 27.83, and 59.82, respectively. If, in calculating these percentages, all employees under 30 years of age be omitted, it will be seen that the very high percentage of 94.58 have been employed 10 years, 63.59 per cent have been employed 20 years, and 28.14 per cent 30 years or more.

The second table on page 263 shows a calculation of the stability of employment on three different dates, in order to determine if there has been any material difference in this respect in recent years. An establishment that is constantly adding to the number of its employees is of course constantly increasing the number of employees that have been employed but a short time, an element which should be taken into consideration in attempting to make any comparisons.

The final table is an analysis of the reasons for which employees left the service of the company. The number leaving voluntarily bears but

an insignificant relation to the total number of employees. Much the larger number leaving resulted from death, old age, or from the necessity of entering the military service.

EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN AT WORK BELOW GROUND, BY AGES AND YEARS OF SERVICE, FEBRUARY, 1892.

Age.	Years of service.												Total.
	Under 1.	1 or under 2.	2 or under 5.	5 or under 10.	10 or under 15.	15 or under 20.	20 or under 25.	25 or under 30.	30 or under 35.	35 or under 40.	40 or under 45.	45 or under 50.	
12													151
13	141	8	2										378
14	138	224	16										445
15	55	132	258										393
16	43	39	310	1									450
17	50	28	232	140									358
18	24	22	66	246									384
19	23	22	39	300									412
20	19	19	22	351	1								365
21	9	2	16	331	7								385
22	9	2	6	90	278								348
23	4	1	2	44	297								322
24	5	1	6	28	282								340
25	3	1	3	20	310	3							337
26	5	5	7	27	237	56							296
27	3	3		29	69	192							294
28	3	5	47	239									276
29	3		1	12	26	234							280
30			1	19	24	234	2						298
31	4		4	13	25	223	29						251
32	2	1	1	14	23	97	113						237
33	2		1	12	36	63	123						218
34	4	1		13	20	39	141						203
35	1		1	6	12	29	142	12					190
36	1		2	5	13	24	92	53					185
37			1	9	13	21	61	80					187
38		3	11	12	32	44	85						187
39				7	15	18	32	115					211
40	1		9	10	32	37	82	39	1				162
41				3	9	17	23	55	55				143
42			1	4	5	16	23	18	76				162
43			1	1	9	16	19	21	95				181
44			1	7	11	26	8	20	108				182
45			2	3	11	22	7	14	114	9			168
46					10	16	22	10	94	16			135
47				1	5	13	13	6	31	66			148
48				3	1	17	15	9	33	70			141
49				2	7	16	18	7	20	71			122
50				1	4	12	8	8	21	67	1		107
51				2	4	5	6	13	16	38	23		97
52					4	14	9	5	9	16	40		72
53					4	2	6	6	5	10	36	3	71
54					2	7	10	5	5	7	31	4	42
55					1	3	8		3	2	8	17	25
56					2	2	4	1	4		3	9	14
57					2	1	2	2	2		1	4	18
58					1	4				1	3	9	7
59				1		1		1	1			3	7
60						2	3					2	1
61											1		5
62					1	2	1		1				
Total.	552	519	1, 069	2, 006	1, 845	1, 528	1, 107	500	694	373	147	51	10, 391

EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN AT WORK ABOVE GROUND,
BY AGES AND YEARS OF SERVICE, FEBRUARY, 1892.

Age.	Years of service.												Total.
	Under 1.	1 or under 2.	2 or under 5.	5 or under 10.	10 or under 15.	15 or under 20.	20 or under 25.	25 or under 30.	30 or under 35.	35 or under 40.	40 or under 45.	45 or under 50.	
12	29												29
13	138	8	1										147
14	2												2
15			1										1
16	2		3										5
17			2	1									3
18			1	1									2
19		2	1	7									10
20	2	1	2	4									9
21				4									4
22			1	4	4								9
23					1								1
24		1	1	2	4								8
25	1		2		3								6
26	1			3	6								10
27		1			5	10							16
28	2			2	1	1							6
29		1	1	2	2	8							14
30			1	1	1	4							7
31			1	1	3	5							10
32		1		6	1	5	2						15
33			1	1	7	5	5						19
34			5	6	3	3	7						24
35	1		1	2	2	3	1	2					12
36				1		2	2	2					7
37				2	3	1	3	4					13
38	1			2	1		4	4					12
39				1	2	2	2	2	1				10
40		1	1	1	1	2	1	4	1				12
41		2		2	3	3		5	2				17
42					5	1	2	3	3				14
43				1	1	3	1	1	5				12
44				5	3	3	4	1	4				20
45						2		1	5				8
46				2	1		2		7				12
47				1	1	1	5	1	3	3			15
48					2	2	2	1	2	8			17
49				1		4	5		1	9			20
50				1	2	6	5	1	1	6			22
51				2		2	2		2	5	1		14
52						2	3	2	1	5	3		16
53					1	2	3	1	1	1	2		11
54				1	1		1		2		1		6
55				1	2		3	1		1	1		9
56				1		2		2		1		2	8
57					1							2	3
58							1	1				2	4
59					2	1			1	1			5
60					1			1					2
61					1	1							2
62								1					1
Total.	179	18	26	72	77	86	66	41	42	40	8	6	661

EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN, AT WORK BELOW AND ABOVE GROUND, BY AGES AND YEARS OF SERVICE, FEBRUARY, 1892.

Age.	Years of service.												Total.
	Under 1.	1 or under 2.	2 or under 5.	5 or under 10.	10 or under 15.	15 or under 20.	20 or under 25.	25 or under 30.	30 or under 35.	35 or under 40.	40 or under 45.	45 or under 50.	
12	29												29
13	279	16	3										298
14	140	224	16										380
15	55	132	259										446
16	45	39	313	1									398
17	50	28	234	141									453
18	24	22	67	247									360
19	23	24	40	307									394
20	21	20	24	355	1								421
21	9	2	16	335	7								369
22	9	2	7	94	282								394
23	4	1	2	44	298								349
24	5	2	7	30	286								330
25	4	1	5	20	313	3							346
26	6	5	7	30	243	56							347
27	3	4		29	74	202							312
28	5	5	47	241	1	1							300
29	3	1	2	14	28	242							290
30			2	20	25	238	2						287
31	4		5	14	28	228	29						308
32	2	2	1	20	24	102	115						266
33	2		2	13	43	68	128						256
34	4	1	5	19	23	42	148						242
35	2		2	8	14	32	143	14					215
36	1		2	6	13	26	94	55					197
37			1	11	16	22	64	84					198
38	1	3	11	14	33	44	89	4					199
39				8	17	20	34	117	1				197
40	1	1	10	11	33	39	83	43	2				223
41		2		5	12	20	23	60	57				179
42			1	4	10	17	25	21	79				157
43			1	2	10	19	20	22	100				174
44			1	12	14	29	12	21	112				201
45			2	3	11	24	7	15	119	9			190
46				2	11	16	24	10	101	16			180
47				2	6	14	18	7	34	69			150
48				3	3	19	17	10	35	78			165
49				3	7	20	23	7	21	80			161
50				2	6	18	13	9	22	73	1		144
51				4	4	7	8	13	18	43	24		121
52					4	16	12	7	10	21	43		113
53					5	4	9	7	6	11	38	3	83
54				1	3	7	11	5	7	7	32	4	77
55				1	3	3	11	1	3	3	9	17	51
56				1	2	4	4	3	4	1	3	11	33
57					3	1	2	2	2		1	6	17
58					1	4	1	1		1	3	11	22
59				1	2	2		1	2	1		3	12
60					1	2	3	1				2	9
61					1	1					1		3
62					1	2	1	1	1				6
Total.	731	537	1, 095	2, 078	1, 922	1, 614	1, 173	541	736	413	155	57	11, 052

NUMBER AND PER CENT OF EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN AT WORK BELOW AND ABOVE GROUND, BY YEARS OF SERVICE, FEBRUARY, 1892.

Years of service.	Employees below ground.	Employees above ground.	Total.	Employees below ground (per cent).	Employees above ground (per cent).	Total (per ct.).
Under 1 year	552	179	731	5.31	27.08	6.61
1 or under 2 years.....	519	18	537	4.99	2.72	4.86
2 or under 5 years.....	1,069	26	1,095	10.29	3.93	9.91
5 or under 10 years.....	2,006	72	2,078	19.31	10.89	18.80
10 or under 15 years.....	1,845	77	1,922	17.76	11.65	17.39
15 or under 20 years.....	1,528	86	1,614	14.71	13.01	14.60
20 or under 25 years.....	1,107	66	1,173	10.65	9.99	10.61
25 or under 30 years.....	500	41	541	4.81	6.20	4.90
30 or under 35 years.....	694	42	736	6.68	6.36	6.66
35 or under 40 years.....	373	40	413	3.59	6.05	3.74
40 or under 45 years.....	147	8	155	1.41	1.21	1.40
45 or under 50 years.....	51	6	57	.49	.91	.52
Total	10,391	661	11,052	100.00	100.00	100.00

NUMBER AND PER CENT OF EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN, BY YEARS OF SERVICE, SEPTEMBER 6, 1886, DECEMBER 31, 1889, AND FEBRUARY, 1892.

Years of service.	Number.			Per cent.		
	September 6, 1886.	December 31, 1889.	February, 1892.	September 6, 1886.	December 31, 1889.	February, 1892.
Under 1 year.....		732	731		6.84	6.61
1 or under 2 years.....		540	537		5.04	4.86
2 or under 5 years.....		1,032	1,095		9.64	9.91
5 or under 10 years.....		1,838	2,078		17.16	18.80
10 or under 15 years.....		1,915	1,922		17.88	17.39
15 or under 20 years.....		1,792	1,614		16.74	14.60
Total under 20 years.....	6,649	7,849	7,977	69.85	73.30	72.17
20 or under 25 years.....	892	1,034	1,173	9.37	9.66	10.61
25 or under 30 years.....	755	635	541	7.93	5.93	4.90
30 or under 35 years.....	660	683	736	6.94	6.38	6.66
35 or under 40 years.....	339	338	413	3.56	3.16	3.74
40 or under 45 years.....	162	131	155	1.70	1.22	1.40
45 or over.....	62	38	57	.65	.35	.52
Total	9,519	10,708	11,052	100.00	100.00	100.00

EMPLOYEES LEAVING THE SERVICE OF THE COAL MINING COMPANY OF ANZIN, BY REASONS FOR LEAVING, 1889 TO 1893.

Year.	Voluntarily.				Dis- missed.	To enter mili- tary service.	Pen- sioned.	Died.	Total.	Per cent of employees leaving voluntarily and dismissed of total employees.
	To enter service in—		Not speci- fied.	Total.						
	Other mines.	Neigh- boring in- dustrial establish- ment.								
1889.....	54	10	167	231	53	34	33	21	372	2.4
1890.....	97	37	53	187	85	299	29	37	637	2.2
1891.....	55	46	64	165	120	304	96	74	759	2.2
1892.....	103	31	48	182	75	277	192	56	782	2.0
1893.....	31	19	46	96	72	330	117	79	694	1.3
Total	340	143	378	861	405	1,244	467	267	3,244	2.0
Per cent ..	10.5	4.4	11.6	26.5	12.5	38.4	14.4	8.2	100.0	.....

In conclusion, attention should be drawn to a point concerning which a study such as the one just made affords information of more than usual value. The material has been presented in such a way as to furnish an opportunity for a statistical comparison of present with former conditions of a body of men, the general and physical conditions of whose labor have remained practically identical. The evidence afforded by such a comparison is irresistible that there has been a steady betterment of the condition of the coal miners of Anzin in almost every element that enters into their life. The age at which they commence work has been advanced, and they consequently enjoy a longer period of schooling. Their hours of labor have been steadily reduced. Average wages have constantly advanced, while there is every reason to believe that the amount of commodities that they will purchase has increased in like or greater ratio. The single matter of housing shows an enormous increase in comfort. A contrasting of the types of houses erected by the company at different periods shows a striking advance by each period over the preceding one. From a dweller in a barrack apartment the miner has become the occupier of an individual cottage with garden attached, and in many cases the owner of his own home. The uncertainties of a possible lack of employment or the cares and anxieties of sickness and approaching old age have been lessened. At the same time the workingman enters more into public life. He comes more into contact with his fellowmen through the exercise of his political rights, and through his participation in the management of the mutual benefit, cooperative, and recreative societies of which he is a member.

The comparisons which have been made throughout the report with conditions elsewhere indicate that the experience of Anzin has been repeated in the other great coal mining centers of France.

RECENT REPORTS OF STATE BUREAUS OF LABOR STATISTICS.

CONNECTICUT.

Eleventh Annual Report of the Bureau of Labor Statistics of the State of Connecticut for the year ending November 30, 1895. Printed by order of the General Assembly. Samuel B. Horne, Commissioner. 280 pp.

This report treats of the following subjects: Poor relief, 101 pages; building and loan associations, 12 pages; condition of manufactures, 66 pages; strikes and lockouts, 14 pages; manual training, 46 pages; laws relating to labor and the first annual report of the State board of mediation and arbitration, 19 pages.

POOR RELIEF.—The object of this inquiry was to ascertain the number of poor in the State and the cost of their maintenance. The statistics for 21 selected towns, covering the years from 1875 to 1894, inclusive, were collected by agents of the bureau. Schedules were also sent by mail to the selectmen of the 168 towns in the State asking for information concerning the number of poor assisted and the expense incurred for the same during the years 1892 and 1894. The amounts reported are only the expenditures by the State and the different towns. They do not include the charity dispensed by individuals or private boards of relief of any character.

The lack of a uniform system of distributing aid and of recording the different transactions, and the paucity of data, especially for the earlier years, render the statistics somewhat incomplete. These and various other matters concerning the advisability of certain classes of relief, the increase or decrease in the numbers assisted and the amounts expended, and the methods prevailing in the different towns, are explained in the text. The two statements that follow present the totals given for the 21 selected towns, the 168 towns, and for the State.

PERSONS AIDED AND EXPENSES FOR POOR RELIEF IN 21 SELECTED TOWNS, 1875 TO 1894.

[The following are the 21 towns, the facts for which are shown in this table: Bridgeport, Colchester, Danbury, East Haddam, Fairfield, Glastonbury, Hartford, Litchfield, Meriden, Middletown, Milford, New Britain, New Haven, New London, Norwich, Plainfield, Tolland, Torrington, Vernon, Waterbury, and Windham.]

Year.	Persons aided.			Expenses.			Total expense to each dollar of assessed value of all property.
	In institutions.	Outside relief.	Total.	In institutions.	Outside relief.	Total.	
1875	496	502	998	\$53,838.74	\$68,017.83	<i>a</i> \$151,856.57	\$0.00135
1876	643	871	1,514	72,001.62	93,729.77	<i>a</i> 196,731.39	.00170
1877	890	1,144	2,034	105,322.97	164,569.08	<i>a</i> 301,392.05	.00170
1878	1,003	1,355	2,358	131,545.60	150,670.00	<i>a</i> 314,215.60	.00184
1879	1,169	1,171	2,340	125,531.93	145,060.54	<i>a</i> 302,592.47	.00173
1880	1,252	1,045	2,297	127,652.95	119,420.43	<i>a</i> 279,573.38	.00156
1881	1,456	1,597	3,053	136,569.30	127,566.99	<i>a</i> 297,136.29	.00163
1882	1,637	2,370	4,007	160,467.86	116,885.64	<i>a</i> 310,853.50	.00167
1883	1,653	2,666	4,319	173,248.64	125,701.95	<i>a</i> 332,950.59	.00175
1884	1,829	3,344	5,173	166,476.77	140,364.65	<i>a</i> 341,341.42	.00179
1885	2,141	4,385	6,526	182,737.49	165,187.48	<i>a</i> 382,924.97	.00199
1886	2,056	4,258	6,314	193,819.94	159,725.96	<i>a</i> 389,045.90	.00199
1887	2,126	3,553	5,679	223,852.13	163,880.75	<i>a</i> 423,732.88	.00215
1888	2,223	3,794	6,017	216,650.03	163,011.34	<i>a</i> 416,161.37	.00209
1889	2,209	3,736	5,945	205,881.67	156,890.34	<i>a</i> 399,772.01	.00195
1890	2,285	4,406	6,691	234,219.74	178,222.03	412,441.77	.00194
1891	2,318	3,792	6,110	234,348.06	183,995.70	418,343.76	.00194
1892	3,973	4,075	8,048	244,138.39	152,768.59	396,906.98	.00179
1893	3,311	3,678	6,989	228,983.56	166,238.23	395,221.79	.00154
1894	4,582	6,210	10,792	255,331.14	197,794.25	453,125.39	.00182

a No division could be made of the expenses incurred by the city of Bridgeport prior to 1890; the amounts are included in the total, but no corresponding distribution given.

PERSONS AIDED AND EXPENSES FOR POOR RELIEF FOR THE STATE, 1892 AND 1894.

Items.	By the 168 towns of the State.		By the State.		Total.	
	1892.	1894.	1892.	1894.	1892.	1894.
Almshouses:						
Persons aided.....	2,942	3,535	<i>a</i> 350	312	3,292	3,847
Net expense of main-tenance	\$178,563.44	\$203,322.88	<i>a</i> \$6,707.39	\$4,180.16	\$185,270.83	\$207,503.04
Hospitals, homes, etc.:						
Persons aided.....	2,271	2,526	<i>a</i> 1,289	1,414	3,560	3,940
Expenses	\$185,775.48	\$187,347.37	<i>a</i> \$216,245.02	<i>b</i> \$190,567.07	\$402,020.50	\$377,914.44
Outside relief:						
Heads of families aided	2,990	4,464	(<i>c</i>)	(<i>c</i>)	2,990	4,464
Other persons aided...	4,189	5,478	(<i>c</i>)	(<i>c</i>)	4,189	5,478
Paid for rent.....	\$31,266.13	\$39,827.22	.....	.....	\$31,266.13	\$39,827.22
Paid for other relief...	\$290,900.33	\$363,273.25	<i>a d</i> \$2,399.65	<i>d</i> \$6,097.23	\$293,299.98	\$369,370.48
Total persons aided	12,392	16,003	<i>a</i> 1,639	1,726	14,031	17,729
Total expense.....	\$686,505.38	\$793,770.72	<i>a</i> \$225,352.06	\$200,844.46	\$911,857.44	\$994,615.18

a For one year and three months.
b Not including \$19,500 appropriated to build hospitals.
c Included in number for almshouses.
d Including expenses of State board of charities, the remainder being amount paid to towns for support of paupers chargeable to the State.

BUILDING AND LOAN ASSOCIATIONS.—In accordance with laws enacted during June, 1895, the building and loan associations of the State come under the supervision of the banking department, and statements as to their condition in the future will be found in the report of the bank commissioners. Comparative figures, however, are furnished

for each of the 16 associations, for which data were given in the fourth annual report. The totals are shown in the following statement:

ASSETS OF BUILDING AND LOAN ASSOCIATIONS AT THE CLOSE OF THE FISCAL YEARS 1894 AND 1895.

Items.	1894.	1895.
Mortgage loans	\$704, 523. 13	\$686, 723. 39
Stock loans	28, 443. 84	40, 603. 52
Cash on hand	48, 285. 14	58, 010. 04
All other assets.....	9, 352. 91	195, 298. 06
Total	790, 605. 02	980, 635. 01

CONDITION OF MANUFACTURES.—Under this title individual reports from 1,000 establishments, grouped by industries, are published and an extended analysis made of the returns for each industry. The totals of the summary for all industries are as follows:

Establishments reporting	1, 000
Employees July 1, 1892.....	115, 139
Employees July 1, 1894.....	98, 617
Employees July 1, 1895.....	112, 002
Establishments advancing wages since July 1, 1894	33
Establishments reducing wages since July 1, 1894	28
Establishments restoring former rates	106

There were many establishments reported in 1895 that were not in existence in 1892. These establishments reported 1,509 employees. Subtracting this number from the total for 1895, the actual decrease was 4,646 and the percentage of decrease 4.04.

The changes in rates of wages reported were only those that were general in character. There were 2,624 employees affected by advances in wages, the average of the percentages of increase being 8.52. The employees affected in establishments reducing wages numbered 1,287, the average of the percentages of decrease being 8.53. There were 20,190 employees affected by the restoration of wages to a former rate, the average of the percentages of increase being 8.5. The average weekly hours of labor in the 1,000 establishments for the year ending July 1, 1895, not considering the days closed, were 58.07; deducting hours lost by reason of days closed, the average was 54.46.

STRIKES AND LOCKOUTS.—An historical statement is made for each labor disturbance that occurred during the year.

MANUAL TRAINING.—The treatment of this subject is confined to a textual discussion which includes a description of various institutions for manual training in Connecticut and elsewhere.

LABOR LAWS AND MEDIATION AND ARBITRATION.—The laws relating to labor enacted at the January session of the legislature, 1895, are reproduced, and a short account given of the action of the board of mediation and arbitration in assisting in a compromise of a strike of the iron molders employed by the Russell & Erwin Company, of New Britain, Conn.

IOWA.

Sixth Biennial Report of the Bureau of Labor Statistics for the State of Iowa, 1894-95. W. E. O'Brien, Commissioner. Printed by Order of the General Assembly. 199 pp.

The report presents individual tabulations of returns from 4,160 working men and women engaged in different industries throughout the State. The questions for which the answers were presented were designed to show the actual condition of the laboring classes. No totals for the State or conclusions are presented, the individual reports only being given as a fair and unbiased showing of actual conditions. In addition to the individual tabulations, quotations are given from answers made by workmen to questions concerning the desirability of labor organizations, foreign immigration, the character of work that is preferable (piece or time), and what action would be of the greatest benefit to the wage earners of the country.

MONTANA.

Second Annual Report of the Bureau of Agriculture, Labor, and Industry of Montana for the year ended November 30, 1894. James H. Mills, Commissioner; A. C. Schneider, Chief Clerk. v, 191 pp.

In the extended introductory, reference is made to various subjects, such as methods of work of the bureau, disturbed industrial conditions, free public employment offices, and protection of human life by means of fire escapes. The following subjects are treated in the report proper: Wages and cost of living, 32 pages; investment, wages, and production, 16 pages; precious and semiprecious metals, 8 pages; agriculture and stock growing, 40 pages; miscellaneous, 49 pages.

WAGES AND COST OF LIVING.—The schedule used in collecting the statistics from wage earners contained 48 questions, designed to cover all material facts of public interest relating to the economic and social condition of the workmen. All employees receiving \$2,000 or more per annum were excluded, and the presentation limited to those coming clearly under the denomination of "wage earners." The results are summarized for 80 occupations and for the principal labor-employing counties. The tables show the percentage of the total number replying affirmatively or otherwise to the different questions, with the average and aggregate wages, expenses, etc.

The opinions and suggestions of wage earners given in reply to the query, "What legislation, if any, would, in your opinion, promote the general welfare, particularly of wage earners following your vocation?" are reproduced in full.

The mileage, number of employees, working time, and average pay of the different classes of employees are given for each railroad in the State.

The average daily wages of employees in and around mines, mills, and smelters, as computed from statements made by employees in nine counties of the State and covering the occupations of 2,085 men, are given as follows:

AVERAGE DAILY WAGES OF EMPLOYEES OF MINES, MILLS, AND SMELTERS.

Occupation.	Average wages per day.	Occupation.	Average wages per day.	Occupation.	Average wages per day.
Mine employees:		Employees in mines, smelters, and quartz mills—continued.		Employees in mines, smelters, and quartz mills—concluded.	
Miners	\$3. 37	Bricklayers and masons	\$5. 33	Furnacemens' help-ers	\$2. 62
Pumpmen	4. 00	Carpenters	4. 01	Laborers	2. 72
Timbermen	3. 75	Charge wheelers ..	2. 50	Machinists	4. 02
Station tenders	3. 50	Concentrator men ..	3. 00	Machinists' helpers ..	2. 85
Carmen	3. 12	Crushermen	3. 19	Millmen	3. 37
Employees in mines, smelters, and quartz mills:		Cooling floor men ..	3. 00	Refiners	5. 00
Foremen	4. 74	Dippers	4. 00	Roasters	2. 93
Amalgamators	4. 08	Dynamo tenders ..	3. 50	Skimmers	4. 25
Blacksmiths	3. 85	Engineers	3. 85	Trammers	2. 87
Blacksmiths' help-ers	2. 73	Firemen	3. 00	Weighers	2. 44
Batterymen	3. 75	Feeders	3. 09	Vannermen	3. 00
Boilermakers	4. 12	Furnacemen	3. 35		

The cost of living is indicated by a presentation of the average rates of board at hotels and boarding houses, average prices of articles of food, and details of receipts and expenses for representative families in different sections of the State.

A list of the labor organizations of the State is accompanied with statistics of the membership.

INVESTMENT, WAGES, AND PRODUCTION.—Reports from 146 manufacturers and 183 establishments engaged in various industries containing information concerning investment, product, employees, wages, hours of work, etc., are grouped and published in detail. As far as possible the average wages for the various classes of labor in the different industries for 1893 and 1894 are placed in comparison.

PRECIOUS AND SEMIPRECIOUS METALS.—The statistical presentation under this title consists of extended quotations from the reports of the United States assay office at Helena, Mont., and the Director of the Mint.

AGRICULTURE AND STOCK GROWING.—Comparative figures are given for 1893 and 1894 of the number and wages of employees of stock growers and farmers; also acreage of land owned and fenced, with character, quantity, and value of the different agricultural products. The number of the different classes of farm animals that perished during the winter and that were killed by wolves are shown, and details concerning the wool clip of 1893 and 1894.

NEBRASKA.

Fourth Biennial Report of the Bureau of Labor and Industrial Statistics of Nebraska for 1893 and 1894. J. B. Erion, Deputy Commissioner. 530 pp.

The report opens with a treatise on the practical utility of industrial statistics and the requirements of the bureau. The subjects treated in the report may be grouped as follows: Mortgage indebtedness, 141 pages; free public employment office, 6 pages; farms, homes, mortgages, and manufactures, 29 pages; valuation of real estate, live stock, steam engines, railroad and sleeping-car property, and telegraph lines, 42 pages; Nebraska's surplus products, 30 pages; assessed valuations, 7 pages; acres under cultivation, 7 pages; irrigation, 72 pages; miscellaneous, 182 pages.

MORTGAGE INDEBTEDNESS.—The number and amount of mortgages filed on different classes of property and the number satisfied is shown for each county by months from June, 1893, to May, 1894; also by county totals for the calendar years 1892 and 1893 and for the twelve months ending May 31, 1894, with the number of sheriffs' sales and other deeds of foreclosure.

VALUATION OF REAL ESTATE, LIVE STOCK, STEAM ENGINES, RAILROAD AND SLEEPING-CAR PROPERTY, AND TELEGRAPH LINES.—These values are shown by county totals. The real estate values show the true and assessed value for 1890 and the value of improved and unimproved property for 1893. The other values are for 1893 only, and show the number, total, and average value of live stock and steam engines with the value of railroad and sleeping-car property and telegraph lines in the State.

NEBRASKA'S SURPLUS PRODUCTS; ASSESSED VALUATIONS; ACRES UNDER CULTIVATION.—The quantity of different farm products marketed is given by counties under the title "Nebraska's surplus." The assessed value of property, total assessment in dollars, total levy in mills and how apportioned, are shown by counties for 1893. The acres under cultivation in different farm products for 1893 are also shown by county totals.

IRRIGATION.—Statistics under this title show the miles of completed and proposed irrigating canals and acres irrigated, with the size of the canals and the cost of construction. The statistics are accompanied by an instructive treatise on this subject.

MISCELLANEOUS.—The presentations under this title consist of quotations from other publications, and the results of some original investigations concerning agricultural, educational, and other conditions as existing in Nebraska; also a compilation of the laws of the State pertaining to labor, irrigation, etc.

NEW YORK.

Twelfth Annual Report of the Bureau of Statistics of Labor of the State of New York for the year 1894. Transmitted to the legislature February 4, 1895. Thomas J. Dowling, Commissioner. 675 pp.

The subjects treated in this report are as follows: Part I, labor organizations, 423 pages; Part II, prison-made goods, 18 pages; Part III, strikes, lockouts, and boycotts, 77 pages; Appendix, 126 pages. The appendix contains a list of the bureaus of labor in the United States and the proceedings of the tenth annual convention of the National Association of Officials of Bureaus of Labor Statistics.

PART I, LABOR ORGANIZATIONS.—The bureau sent to each trade organization in the State a letter of inquiry containing the following questions: Date of organization; number of members at time of organization; number of members at present time; rate of wages previous to organization; rate of wages at present time; hours of labor per day previous to organization; hours of labor per day at present time. Is improved machinery used in your trade or calling? Has the use of machinery increased the number employed in your trade or calling; and what per cent? Has the use of machinery decreased the number employed in your trade or calling; and what per cent? In your opinion has a reduction of wages been prevented by the fact of the existence of your organization? Have the general conditions in your trade or calling been improved owing to the existence of your organization? Has your organization rendered any aid, financially or otherwise, to its members during the past year? How much? The answers of the various organizations to these questions are printed in detail.

Returns were received from 695 organizations. The following statement shows the results of the summarization of the detail tables which present the statistics relative to wages and hours of labor:

WAGES AND HOURS OF LABOR PRIOR TO ORGANIZATION AND IN 1894, BY INDUSTRIES.

Industries.	Wages, number of organiza- tions reporting—				Hours of labor, number of organizations reporting—			
	In- crease.	De- crease.	No change	Total.	In- crease.	De- crease.	No change	Total.
Building.....	136	18	51	205	.....	177	30	207
Cigars, cigarettes, and tobacco.....	31	3	7	41	.....	40	9	49
Clothing.....	30	2	6	38	1	27	12	40
Coachmen and livery-stable employees	3	.....	1	4	.....	1	4	5
Food products.....	8	1	10	19	2	12	5	19
Furniture.....	1	1	3	5	.....	3	3	6
Glass and terra cotta.....	4	.....	2	6	.....	3	3	6
Hats, caps, and furs.....	1	1	1	3	.....	2	2	4
Hotel and restaurant employees.....	4	1	2	7	.....	5	2	7
Iron and steel.....	25	18	21	64	.....	20	45	65
Leather.....	6	3	1	10	.....	1	12	13
Malt and spirituous liquors and mineral waters.....	16	1	1	18	1	12	5	18
Marine.....	2	2	4	8	.....	1	5	6
Metals.....	2	2	2	6	.....	.....	6	6
Musicians and musical instruments.....	10	.....	3	13	.....	3	10	13

WAGES AND HOURS OF LABOR PRIOR TO ORGANIZATION AND IN 1894, BY
INDUSTRIES—Concluded.

Industries.	Wages, number of organiza- tions reporting—				Hours of labor, number of organizations reporting—			
	In- crease.	De- crease.	No change	Total.	In- crease.	De- crease.	No change	Total.
Printing, binding, engraving, stereotyp- ing, and publishers' supplies	21	2	11	34	.....	17	20	37
Railroad employees (steam)	57	3	25	85	2	27	51	80
Railroad employees (street surface)	1	.....	1	2	.....	2	.....	2
Stone workers	13	1	6	20	.....	19	3	22
Street paving	3	.....	6	9	.....	3	6	9
Textiles	8	1	1	10	.....	8	2	10
Theatrical	3	.....	.....	3	.....	2	2	4
Wood workers	11	.....	1	12	.....	10	2	12
Miscellaneous	6	2	8	16	.....	9	8	17
Total	402	62	174	638	6	404	247	657

There were 49 divisions of working time reported by 656 organizations. Eight hours constituted a day's work in 42 branches of trade, and the eight-hour day was enjoyed by 48,411 members of 169 organizations. The number is nearly one-third of the 155,843 members reported. The daily hours of work and the number of members observing the indicated working time is shown for each organization reported.

Four hundred and seventy-four organizations, with a membership of 121,957, report \$511,817.59 as having been expended in benefits during the year, of which amount \$106,801.69 was to assist those out of work, \$60,207.98 to assist the sick, \$93,437.92 in cases of death, \$89,150.04 to support strikes, \$10,676.74 donated to other labor organizations, and \$151,543.22 not classified.

Out of 695 organizations, 371 report that improved machinery is used, 285 report that it is not, and 39 failed to answer the question. Sixty-three organizations report that the introduction of machinery has increased the working force, while 208 state that it has resulted in a reduction of the number of employees, and 47 failed to answer the question.

Five hundred and forty-four organizations reported that the existence of the organization had prevented a reduction in wages, and 96 reported that it had not, while 22 failed to answer the question, and 33 reported that there had been no attempt at reduction of wages. Six hundred and twenty-two organizations reported that the general conditions of labor in their trades had been improved by the existence of the union, 49 that the union had not improved general conditions, while 24 failed to answer the question.

There were 667 organizations that reported their membership as 46,455 at the date of organization, and at the time of reporting in 1894 691 organizations reported their membership at 155,843.

Extended quotations are made from remarks contained in the reports of organizations relative to desired legislation, immigration, and miscellaneous subjects affecting labor.

PART II, PRISON-MADE GOODS.—A law was enacted limiting the number of prisoners engaged in the manufacture of brooms and brushes made of broom corn to 5 per cent of the total number in the State engaged in that industry. This part of the report deals mainly with an investigation ordered by this enactment to determine whether the number employed was in excess of the 5 per cent permitted. The number being found too large, the governor of the State accordingly ordered that it be reduced. The sale of prison-made goods is also discussed.

PART III, STRIKES, LOCKOUTS, AND BOYCOTTS.—These statistics cover the labor disturbances reported as having occurred in the State during the nine years from 1885 to 1893, inclusive, the information being published in detail for each strike, lockout, and boycott.

The details are summarized in the following statements:

RESULTS OF STRIKES, LOCKOUTS, AND BOYCOTTS, BY YEARS, 1885 TO 1893.

Year.	Establishments involved in strikes which were—			Total establishments involved.	Number of persons engaged.	Number of persons who lost positions.
	Successful.	Compromised or partly successful.	Unsuccessful.			
1885.....	1,202	207	211	1,620	52,442	.....
1886.....	1,125	847	1,714	3,686	175,369	6,399
1887.....	732	190	755	1,677	54,240	8,241
1888.....	501	83	443	1,027	24,092	2,271
1889.....	873	109	392	1,374	32,783	4,203
1890.....	5,580	170	512	6,262	93,894	5,220
1891.....	3,727	78	685	4,490	61,599	3,531
1892.....	1,541	87	770	2,398	35,824	1,997
1893.....	1,719	89	225	2,033	27,545	2,374
Total.....	17,000	1,860	5,707	24,567	557,788	34,236

GAINS AND LOSSES FROM STRIKES, LOCKOUTS, AND BOYCOTTS, BY YEARS, 1885 TO 1893.

Year.	Loss in wages.	Cost to labor organizations.	Estimated gain in wages.	Number engaged and who received increase of wages where wages were involved.	Loss to employers.
1885.....	\$921,934.50	\$171,689.13	\$906,153.88	10,601	\$416,426.00
1886.....	3,303,281.55	579,857.25	2,403,616.90	31,198	2,606,404.00
1887.....	2,103,616.45	239,692.78	998,693.55	11,512	1,166,766.20
1888.....	1,083,653.99	135,357.05	410,053.68	3,869	390,730.00
1889.....	588,114.81	66,068.23	663,819.76	10,624	533,366.95
1890.....	1,457,554.32	143,123.85	3,122,883.10	42,097	549,874.43
1891.....	1,071,113.37	284,057.85	787,022.66	22,194	374,946.50
1892.....	846,766.34	241,784.06	497,181.06	7,977	355,215.90
1893.....	305,341.45	34,535.34	535,164.17	7,887	102,680.10
Total.....	11,681,376.78	1,896,165.54	10,324,588.76	147,959	6,496,410.08

NORTH CAROLINA.

Eighth Annual Report of the Bureau of Labor Statistics of North Carolina for the year 1894. B. R. Lacy, Commissioner. 304 pp.

The report treats of the following subjects: Statistics of and letters concerning cotton, woolen, and other factories, 86 pages; agricultural statistics and views of farmers, 100 pages; reports from and views of mechanics, 61 pages; the fishery industry, 9 pages; statistics of employees and wages of railroads, 5 pages; organized labor, 17 pages; miscellaneous, 26 pages.

STATISTICS OF AND LETTERS CONCERNING COTTON, WOOLEN, AND OTHER FACTORIES.—These statistics were obtained by means of a circular letter. Reports were received from a number of factories engaged in various industries in different sections of the State. These reports relate to the character of goods manufactured, number of spindles and looms, days in operation, hours constituting a day's work, advisability of reducing working time, average daily wages, etc. The data are presented in detail for each establishment, arranged by counties. The facts are summarized by counties for some industries, but no general average for the State is attempted.

AGRICULTURAL STATISTICS AND VIEWS OF FARMERS.—The information given under this title was obtained from the best and most influential farmers in the State. The wages and other compensation of farm laborers and their condition morally, socially, and financially are shown. The individual returns are presented in full and the averages given by counties and for the State. The averages for the State show that the working day for the year is about nine hours, and the average wages per month for laborers, \$9, with extras for married men. The average for women was \$5 and for children \$3 per month. About 66 $\frac{2}{3}$ per cent of the farmers report a decrease in wages, and the remainder say there has been no change. Numerous letters from farmers and others in different sections of the State expressing views on various phases of agricultural pursuits follow the statistics.

REPORTS FROM AND VIEWS OF MECHANICS.—This presentation covers information concerning the condition of trade, wages, methods of payment, effect of labor-saving machinery on wages, apprenticeship and age at which children should engage in the different trades, cost of living, and social and moral conditions. The individual reports are published and summarized by trades. The statistics are accompanied by letters from a number of mechanics expressing views as to the legislation needed for the elevation of the labor classes.

STATISTICS OF EMPLOYEES AND WAGES OF RAILROADS.—These statistics show the number of the different classes of employees and the average daily wages for each class for each railroad of the State.

ORGANIZED LABOR.—The chapter on this subject is composed of letters from various labor organizations in the State, describing the organization and setting forth its objects and purposes; also expressing views on various subjects pertaining to labor.

NORTH DAKOTA.

Third Biennial Report of the Commissioner of Agriculture and Labor to the Governor of North Dakota for the two years ending June 30, 1894.
Nelson Williams, Commissioner. 332, lxiii pp.

In addition to introductory remarks concerning the methods of collecting and the use of statistics, the first 24 pages of this report contain copies of letters from a number of persons who have had experience in the cheese and creamery business of the State, giving reasons for the decline of the industry during the past two or three years. Attention is also called to a pamphlet issued under the direction of the bureau containing information concerning the Russian thistle. The subjects treated in the report may be grouped as follows: Agricultural statistics, 59 pages; financial and census statistics, 131 pages; cost of producing wheat and remarks of farmers, 159 pages; cost of producing corn, world's crop of wheat, 9 pages; industrial statistics, 11 pages.

AGRICULTURAL STATISTICS.—The average yield per acre, and in some instances the value of the different crops and other farm products, are shown in detail by county and State totals. Comparisons are made of the yearly production, acreage, and average yield per acre of the principal products, by county totals, from 1888 to 1893, inclusive, and the number and size of farms given, with the acreage under cultivation for 1893 and 1894. The totals for some of the products enumerated are as follows:

ACREAGE AND PRODUCTION OF VARIOUS AGRICULTURAL PRODUCTS, 1893.

Product.	1893.					Acres sown, 1894.
	Acres sown.		Acres harvested.		Total product (bushels).	
	Number.	Average yield per acre (bushels).	Number.	Average yield per acre (bushels).		
Wheat.....	3, 019, 253	10. 51	2, 902, 301	10. 93	31, 732, 169	3, 037, 643
Oats.....	502, 447	20. 89	483, 844	21. 70	10, 498. 451	548, 369
Barley.....	227, 250	17. 57	218, 255	18. 30	3, 993, 236	258, 252
Flax.....	57, 467	5. 75	53, 336	6. 19	330, 214	110. 365
Rye.....	40, 959	8. 98	38, 236	9. 62	367, 976	52, 099
Corn.....	15, 582	a 15. 80	.....	.....	245, 734	38, 696
Potatoes.....	15, 783	82. 31	.....	.....	1, 299, 090	19, 627

a The figures here apparently should be 15.77; those given are, however, according to the original.

FINANCIAL AND CENSUS STATISTICS.—The number of persons assessed and the number and assessed value of live stock and of all personal property is given by county and State totals. Assessed valu-

ation of real property, debts, and cash in treasury are shown for the different political subdivisions of the State.

COST OF PRODUCING WHEAT AND REMARKS OF FARMERS.—The statistics concerning the cost of production of wheat were obtained by means of circulars addressed to representative farmers in different sections of the State. The acreage sown to wheat by the farmers who furnished information as to cost in the different years was as follows: 1891, 9,734 acres; 1892, 11,496 acres; and 1893, 125,253 acres. The total acreage sown in wheat in the entire State for the same years was as follows: 1891, 2,847,125; 1892, 2,878,089; and 1893, 3,019,253. The average cost per acre and the total for each item of cost are shown in detail for each return, and the totals and averages for counties and the State summarized. The results are computed separately for the wheat sown and harvested by the use of—first, drills and binders; second, broadcast and binders; third, drills and headers; and fourth, broadcast and headers. The numerous items enumerated in the report as entering into the total cost should be considered before comparing the results with other computations concerning the cost of production. It is stated that the results shown for 1893 can be taken as an approximately correct average for that year, but the figures for 1891 and 1892 can not be regarded as so accurately representative, as the answers for those years were not numerous enough to give safe averages. The average cost per acre and per bushel by the four methods enumerated is as follows:

AVERAGE COST OF PRODUCING WHEAT, 1891, 1892, AND 1893.

Sown and harvested by—	1891.		1892.		1893.	
	Per acre.	Per bushel.	Per acre.	Per bushel.	Per acre.	Per bushel.
Drills and binders	\$9.990	\$0.347	\$7.873	\$0.463	\$6.741	\$0.562
Broadcast and binders.....	9.084	.391	8.169	.473	6.922	.573
Drills and headers	7.429	.397	6.281	.535	5.442	.864
Broadcast and headers.....	7.869	.372	6.496	.413	5.628	.692
Average	9.253	.365	7.601	.471	6.621	.581

INDUSTRIAL STATISTICS.—The number of partners and stockholders, capital invested, cost of materials, and value of product are shown for a number of establishments that reported for different industries in 1892 and 1893.

PENNSYLVANIA.

Annual Report of the Secretary of Internal Affairs of the Commonwealth of Pennsylvania. Vol. XXII, 1894. Part III, Industrial Statistics. Albert S. Bolles, Chief of Bureau. 974 pp.

This report, the Twenty-second Annual of the Bureau of Industrial Statistics of Pennsylvania, treats of the following subjects: Women in industry, 237 pages; building trades, 446 pages; strikes, 13 pages;

manufacture of pig iron, 128 pages; statistics of manufactures, 113 pages; mine accidents, 26 pages.

WOMEN IN INDUSTRY; BUILDING TRADES.—The presentations concerning these subjects consist of quotations from numerous letters from women employees in different industries and from men engaged in the building trades. These letters pertain to the treatment of employees, wages, apprenticeship, etc. Tabulations are also given for a number of reports from women engaged in various industries, presenting information concerning nationality, cost of board, wages, time of payment, comparative wages of men, hours of work, and pay for time lost by sickness or vacation. The reports tabulated for the building trades show the range of wages from 1890 to 1894 and answers to numerous questions concerning wages, hours of labor, apprenticeship, etc. The tabulations give detailed information as to conditions prevailing in different industries throughout the State.

STRIKES.—A short history is given of the most notable strikes that occurred in the State during the year. The total estimated loss in wages from strikes and lockouts in Pennsylvania from 1881 to 1894 is given as \$25,179,210. The industry, locality, number of persons engaged, date of beginning and ending, and other facts are shown for the strikes and lockouts that occurred in the State during 1894.

MANUFACTURE OF PIG IRON.—A detailed description and a historical sketch are given of the pig-iron industry of the State. The results of chemical analyses are shown for the different kinds of ore, the production is compared with the production of other States, and the present status of the industry and the methods and cost of manufacture are treated.

STATISTICS OF MANUFACTURES.—Facts are given relative to the number of persons employed, wages paid, and value of product for 412 manufacturing plants for which returns were received for 1894 and comparative figures given for 1892 and 1893. Reports were not secured from all the plants in the State, but from a sufficient number, it was believed, to form correct general deductions. The results are summarized as follows:

EMPLOYEES, WAGES, AND VALUE OF PRODUCT OF 412 MANUFACTURING ESTABLISHMENTS, 1892, 1893, AND 1894.

Items.	1892.	1893.	1894.	Per cent of decrease.	
				1892 to 1893.	1893 to 1894.
Average number of employees	149,690	132,653	116,310	11.38	12.32
Total wages.....	\$72,575,550	\$60,629,740	\$48,268,005	16.46	20.39
Value of product.....	\$286,402,751	\$236,919,298	\$191,492,115	17.28	19.17

Various reasons are given for the decrease in the different industries. The following statement is presented to show the decrease in employees by industries:

EMPLOYEES OF 412 MANUFACTURING ESTABLISHMENTS, BY INDUSTRIES, 1892, 1893, AND 1894.

Industry.	1892.	1893.	1894.
Iron.....	103, 471	92, 890	79, 829
Carpets.....	4, 648	4, 097	3, 623
Hosiery.....	1, 786	1, 547	1, 513
Woolen.....	5, 390	4, 543	4, 001
Cotton.....	3, 818	3, 490	3, 093
Glass.....	7, 239	6, 579	5, 152
Miscellaneous.....	23, 338	19, 507	19, 099
Total.....	149, 690	132, 653	116, 310

MINE ACCIDENTS.—The statistics relating to accidents in coal mines were obtained from the reports of the mine inspectors, and are as follows:

ACCIDENTS IN COAL MINES, 1889 TO 1893.

	1889.	1890.	1891.	1892.	1893.
Anthracite coal:					
Product per employee, tons.....	242	281	360	352	342
Fatal accidents.....	384	378	427	396	455
Employees to each fatal accident.....	312	311	288	327	303
Employees to each nonfatal accident.....	120	116	122	127	129
Tons mined to each fatal accident.....	101, 490	106, 260	103, 923	115, 501	103, 691
Tons mined to each nonfatal accident.....	39, 051½	39, 729	44, 253½	44, 817½	44, 134
Bituminous coal:					
Product per employee, tons.....	565	609	564	590	531
Fatal accidents.....	105	146	237	133	131
Employees to each fatal accident.....	581	458	312	592	1, 624
Employees to each nonfatal accident.....	203	177	235	200	236
Tons mined to each fatal accident.....	329, 101	273, 420	176, 319	350, 199	331, 465
Tons mined to each nonfatal accident.....	114, 803	107, 609½	133, 081½	118, 515½	125, 497

The principal provisions of the different laws that have regulated mining and mine inspection in the State are quoted. The methods of enforcing the various provisions and the effect the enactments have had in preserving the health and lives of those engaged in mining are discussed, numerous quotations being made from the reports of the different inspectors.

RHODE ISLAND.

Eighth Annual Report of the Commissioner of Industrial Statistics, made to the General Assembly at its January Session, 1895. Henry E. Tiepke, Commissioner. viii, 327 pp.

This report contains the result of an investigation of the textile manufactures of the State, the condition of skilled labor in that branch of industry, and the retail prices of food and fuel. These three subjects were chosen in 1893 as the basis of a permanent line of inquiry which should annually cover certain specific subjects. The space allotted to each subject in the report for 1894 is as follows: Employees returns, textile industries, 224 pages; retail prices, 43 pages; statistics of manufactures, textile industries, 55 pages.

EMPLOYEES RETURNS, TEXTILE INDUSTRIES.—These returns show for each of 2,299 employees in the cotton, woolen, and mixed textile industries numerous facts concerning their civil and social conditions. The returns are summarized by towns and for the State. The totals for some of the items shown for all three branches of the industry are as follows:

Number of returns.....	2, 299
Married	1, 559
Single	690
Widowers	50
Native born.....	827
Foreign born	1, 472
Largest number in family	15
Smallest number in family	2
Number owning homes.....	245
Number free from incumbrance.....	88
Number hiring tenements (39 also own homes)	1, 373
Highest daily wages	\$6.00
Lowest daily wages.....	.40
Number receiving an increase in wages during the year.....	32
Number receiving a decrease in wages during the year.....	1, 367
Number unemployed during a portion of the year.....	1, 692

RETAIL PRICES.—The average retail prices of different articles of food and fuel are shown by cities, towns, counties, and for the State. The summary for the State is as follows:

AVERAGE RETAIL PRICES OF FOOD AND FUEL FOR THE STATE, 1894.

Articles.	1894.			
	January.	April.	July.	October.
Apples, per peck.....	\$0.438	\$0.532	\$0.304	\$0.243
Beans, per peck .....	.661	.640	.669	.655
Beef (soup or corned), per pound .....	.071	.068	.070	.066
Beef (roasting), per pound.....	.136	.131	.138	.132
Bread, per loaf.....	.074	.074	.072	.066
Butter, per pound.....	.335	.289	.264	.304
Cabbage, per pound.....	.021	.026	.020	.019
Cheese, per pound.....	.159	.160	.152	.155
Coal (white ash stove), per ton.....	6.450	6.280	5.710	5.650
Codfish, per pound .....	.072	.073	.072	.072
Corn meal, per pound .....	.026	.026	.026	.026
Cracked wheat, per pound .....	.053	.035	.048	.048
Crackers (common), per pound.....	.076	.074	.074	.073
Dried apples, per pound.....	.134	.140	.154	.125
Eggs, per dozen.....	.338	.188	.224	.289
Fresh fish (cod), per pound.....	.094	.095	.092	.090
Fresh fish (haddock), per pound .....	.080	.082	.082	.079
Flour (family), per barrel	4.830	4.630	4.510	4.180
Hams (smoked), per pound .....	.125	.120	.142	.131
Kerosene oil, per gallon.....	.100	.099	.098	.097
Lard, per pound.....	.116	.107	.107	.110
Mackerel (salt), per pound .....	.132	.123	.124	.127
Milk, per quart .....	.059	.055	.053	.059
Molasses, per gallon .....	.517	.512	.507	.507
Mutton, per pound.....	.106	.105	.123	.097
Oatmeal, per pound .....	.049	.048	.050	.049
Onions, per quart .....	.043	.041	.050	.042
Pickles, per quart.....	.130	.129	.132	.130
Pork (salt), per pound .....	.117	.105	.106	.110
Potatoes, per peck .....	.250	.236	.260	.222
Raisins, per pound .....	.105	.101	.101	.099
Rye meal, per pound .....	.031	.031	.031	.030
Salt, per pound.....	.017	.017	.016	.016
Soap (hard), per pound.....	.052	.052	.053	.052
Sugar, per pound.....	.052	.051	.051	.052
Tea (common), per pound .....	.453	.444	.440	.440
Tripe, per pound.....	.072	.069	.072	.070
Vinegar, per gallon.....	.245	.245	.246	.241
Wood (sawed and split), per cord	7.620	7.400	7.690	7.540

STATISTICS OF MANUFACTURES, TEXTILE INDUSTRIES.—The bureau secured reports from 121 manufacturers, covering the operations of their establishments during 1893 and 1894. Fifty-six of these reports were for the cotton industry, 44 for the woolen industry, 10 for print works, dyeworks, and bleacheries, 8 for hosiery and knit goods, and 3 for silk and silk goods. The statistics are given in detail for each industry. A summary for the 121 establishments is presented in the following statement:

STATISTICS OF 121 MANUFACTURING ESTABLISHMENTS, 1893 AND 1894.				
Items.	1893.	1894.	Increase (+) or decrease (—).	
			Amount.	Per cent.
Establishments	121	121	.....	.....
Private firms	58	57	—1	—1. 72
Partners:				
Male	96	86	—10	—10. 42
Special	7	19	+12	+171. 43
Total	103	105	+2	+1. 94
Corporations	63	64	+1	+1. 59
Stockholders:				
Male	702	786	+84	+11. 97
Female	347	382	+35	+10. 09
Banks, trustees, etc	84	104	+20	+23. 81
Total	1, 133	1, 272	+139	+12. 27
Total partners and stockholders	1, 236	1, 377	+141	+11. 41
Capital invested	\$37, 578, 111	\$39, 113, 530	+\$1, 535, 419	+4. 09
Employees:				
Greatest number	30, 352	28, 618	—1, 734	—5. 71
Smallest	26, 570	20, 822	—5, 748	—21. 63
Average	28, 704	25, 773	—2, 931	—10. 21
Total wages	\$10, 466, 032	\$8, 436, 246	—\$2, 029, 786	—19. 39
Average annual wages	\$364. 62	\$327. 33	—\$37. 29	—10. 23
Average days in operation	282. 05	251. 68	—30. 37	—10. 77
Cost of materials used	\$27, 496, 995	\$21, 130, 276	—\$6, 366, 719	—23. 15
Value of goods made and work done	\$48, 405, 877	\$37, 404, 848	—\$11, 001, 029	—22. 72

TENNESSEE.

Fourth Annual Report of the Bureau of Labor, Statistics, and Mines to the Forty-ninth General Assembly of the State of Tennessee. January, 1895. John E. Lloyd, Commissioner. 200 pp.

The contents of the report are grouped as follows: Introduction, 54 pages; statistics of mines and mine inspection, 56 pages; miscellaneous, 86 pages.

INTRODUCTION.—A short sketch is given of the financial and industrial depression, which is followed by articles on the relation between capital and labor, arbitration, and the importance of statistics, also recommendations concerning additional legislation pertaining to the work of the bureau. Sketches are also given of the Chicago strike and the coal miners' great strike of April 21, 1894.

STATISTICS OF MINES AND MINE INSPECTION.—There was reported as mined in Tennessee during the year 1894, 2,471,437 tons of coal, show-

ing an increase over 1893 of 1,041,469 tons. The mines of the State gave employment to 2,799 miners, 274 labor miners, 251 trappers, 112 drivers, and 328 men employed in offices, shops, and yards.

The number of the different classes of employees, number of accidents, animals, and locomotives in use, kegs of powder used, wages, and quantity of coal mined are shown for each mine, the mines being grouped for the three districts into which the State is divided.

The report of inspection, in addition to giving the locality of the mines and names of the superintendents, shows the method of ventilating, condition of air courses, condition of entries and doors, also the cubic feet of air per minute at inlet and outlet, and remarks concerning the general condition of the mine at time of inspection and additions or changes required by the inspector. The results are shown for two inspections made during the year.

The names of the men who received injuries resulting fatally are given with the name and location of the mine, also the testimony given and the verdict of the coroner's jury in each case. The report also shows the result of the analysis of the coal for each mine in the State.

MISCELLANEOUS.—Under this head are grouped articles on different subjects. The phosphate deposits of the State are treated with considerable detail. This mineral was first discovered in Lewis County, Tenn., during the latter part of 1893, and the deposits are now shown to be quite extensive. The article is accompanied with a tabular description of the different phosphate beds. In an article on "manganese" it is stated that the first manganese mined in the United States was mined in Tennessee in 1837, but comparatively nothing has been done to develop the deposits, though manganese of a high grade exists in large quantities in nearly every county in east Tennessee. The different varieties of marble found in the State are described in an article on that subject. The names and locations of the different cotton and woolen mills in the State are shown; also a synopsis of the statistics of farms, homes, and mortgages for the State, as published by the Eleventh Census of the United States. An appendix gives the report on the Chicago strike by the United States Strike Commission.

WEST VIRGINIA.

Report of the Commissioner of Labor of the State of West Virginia, 1893-1894. John M. Sydenstricker, Commissioner. 211 pp.

This is the first annual report of the commissioner of labor of West Virginia, and covers the year ending June 30, 1894. The introductory, which refers to the needs of the bureau, and gives a copy of the law under which it was organized, is followed by a discussion of the "functions and value of labor statistics," and the volume is closed with a treatise on the "financial and industrial depression." The statistics

presented are grouped as follows: Laborers' statistics, 23 pages; railroad statistics, 4 pages; coal-mine operators' statistics, 11 pages; manufacturing and mechanical industries, 33 pages; agricultural statistics, 13 pages; coal, coke, and oil statistics, 31 pages; building and loan associations, 30 pages; farms, homes, and mortgages, 19 pages.

LABORERS' STATISTICS.—The individual reports of 189 laborers engaged in various occupations in different sections of the State are given in full. The information was collected by correspondence, and consists of replies to questions concerning nativity, residence, name of employer, occupation, hours of labor, earnings of self and family, cost of living, character of employment of wife and children, education of children, deductions from wages, apprenticeship, increase or decrease in wages, and cost of living, savings, debts, etc.

RAILROAD STATISTICS.—Statistics are given in detail for each of 25 railroads, showing for the State the miles of road, the average number of employees during the year, the total number at the time of making the report, the number of each class of employees, and the average monthly and total wages for the year.

MANUFACTURING AND MECHANICAL INDUSTRIES.—Reports are published in full for each of 77 establishments showing answers to questions concerning the value of buildings, land, and machinery, cost of materials, value of product, and details concerning employees and wages. In addition the report of the Eleventh Census of the United States relating to manufacturing and mechanical industries is reproduced.

AGRICULTURAL STATISTICS.—The bureau secured reports from a number of farmers in different sections of the State which are published in detail, by counties, and contain information pertaining to the size, the entire value of farms, and the value of the portion used in farming operations, value of personal property and of farm products, expenses of farming, yield, and value of different crops, etc.

COAL, COKE, AND OIL STATISTICS.—The statistics concerning the production for each of these industries in the State are shown in detail by totals for districts and counties, with percentages of increase or decrease. It is stated that the State ranks fourth in the coal-producing States of the country. The product increased from 672,000 short tons in 1873 to 10,708,578 short tons in 1893. The coke product increased from 138,755 short tons in 1880 to 1,062,076 short tons in 1893, and the petroleum from 120,000 barrels in 1876 to 8,445,412 barrels in 1893. A list of the names and addresses of the coal operators of the State is given, with statistics concerning investment, thickness of seam, days mines were worked during the year, output, number of miners and other employees, and total wages paid different classes.

BUILDING AND LOAN ASSOCIATIONS.—The reports for 56 associations in the State are shown in detail, and convenient summaries made of the statistics for a number of representative associations.

NINTH REPORT ON THE ANNUAL STATISTICS OF MANUFACTURES IN MASSACHUSETTS.

The Annual Statistics of Manufactures, 1894. Ninth Report. xvi, 229 pp. (Issued by the Bureau of Statistics of Labor, Horace G. Wadlin, Chief.)

This report consists of an introduction, 3 pages; tables presenting the statistics in detail, 165 pages; the analysis, 83 pages. There are also 49 pages devoted to an industrial chronology of the State, which gives for each town and city the principal events affecting the industrial establishments during 1894.

The statistics are not shown for all the manufacturing and mechanical industries of the State, the report being confined to a comparison of returns from the same establishments reporting for the different years. Comparisons are made for 4,093 establishments for 1893 and 1894, for 3,073 establishments for the five years from 1890 to 1894, inclusive, and for 857 establishments for the ten years from 1885 to 1894, inclusive. The statistics presented in this synopsis have been selected principally from those given for 1893 and 1894, to which the major portion of the report is devoted.

Reports were received from 4,486 establishments for 1894; of this number 4,093 are compared with reports for 1893. These reports are grouped in 75 classified industries, and reflect the industrial conditions prevailing in the State during the two years.

The 4,093 establishments were conducted during 1894 by 3,183 private firms and 869 corporations, which were managed by 43,337 individuals, of whom 5,056 were partners and 38,281 stockholders. Of the partners 95.63 per cent were males, 2.49 per cent females, and 1.88 per cent estates, etc. Of the stockholders 56.45 per cent were males, 32.55 per cent females, and 11 per cent banks, trustees, etc. Considering the partners and stockholders in the aggregate, 61.02 per cent were males, 29.05 per cent were females, and 9.93 per cent banks, trustees, etc.

The increase or decrease in capital invested, wages paid, stock used, and goods made and work done in 1894 as compared with 1893 are shown in the two statements which follow for each of the 9 leading industries of the State, and for the remaining 66, of the 75 referred to above, considered together.

STATISTICS OF MANUFACTURES IN 75 INDUSTRIES, 1893 AND 1894.

Industries.	Year.	Estab-lish-ments.	Capital in-vested.	Wages paid.	Stock used.	Goods made and work done.
Boots and shoes	1893	638	\$26,084,810	\$20,477,354	\$49,901,149	\$84,425,319
	1894	638	26,125,879	20,082,006	48,536,031	82,479,517
Carpetings	1893	11	7,993,248	1,589,019	4,787,252	7,427,385
	1894	11	7,277,249	1,329,350	3,621,574	5,760,705
Cotton goods	1893	148	115,110,469	24,547,036	46,150,475	85,829,812
	1894	148	114,013,597	21,863,643	41,893,414	74,985,327
Leather.....	1893	141	7,939,915	2,797,042	11,381,709	16,063,980
	1894	141	8,344,321	2,722,360	10,997,498	15,563,653
Machines and machinery	1893	322	30,447,599	8,613,264	9,095,079	25,387,721
	1894	322	30,414,153	7,276,856	7,964,667	21,774,080
Metals and metallic goods	1893	327	19,924,086	6,628,730	10,585,088	22,361,691
	1894	327	19,367,325	6,591,555	9,186,323	19,363,367
Paper and paper goods	1893	98	24,497,673	4,082,892	14,914,112	23,682,831
	1894	98	24,881,825	3,961,597	13,570,057	22,217,777
Woolen goods	1893	115	25,233,739	5,747,269	16,377,058	27,778,635
	1894	115	24,094,195	4,887,984	13,019,911	22,284,958
Worsted goods	1893	21	13,738,952	3,334,653	10,434,830	16,240,380
	1894	21	15,225,680	2,903,940	8,587,957	13,347,789
Other industries (66)	1893	2,272	160,150,654	44,678,678	146,612,728	243,740,268
	1894	2,272	147,903,412	39,483,794	129,834,604	218,367,401
Total	1893	4,093	431,121,145	122,495,937	320,239,480	552,938,022
	1894	4,093	417,647,636	111,103,085	287,212,036	496,144,574

DECREASE IN MANUFACTURES IN 1894 AS COMPARED WITH 1893 IN 75 INDUSTRIES.

Industries.	Decrease in—							
	Capital.		Wages.		Stock used.		Goods made and work done.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
Boots and shoes ...	<i>a</i> \$41,069	<i>a</i> 0.16	\$395,348	1.93	\$1,365,118	2.74	\$1,945,802	2.30
Carpetings	715,999	8.96	259,669	16.34	1,165,678	24.35	1,666,680	22.44
Cotton goods.....	1,096,872	.95	2,683,393	10.93	4,257,061	9.22	10,844,485	12.63
Leather.....	<i>a</i> 404,406	<i>a</i> 5.09	74,682	2.67	384,211	3.38	500,327	3.11
Machines and ma- chinery	33,446	.11	1,336,408	15.52	1,130,412	12.43	3,613,641	14.23
Metals and metal- lic goods.....	556,761	2.79	37,175	.56	1,398,765	13.21	2,998,324	13.41
Paper and paper goods.....	<i>a</i> 384,152	<i>a</i> 1.57	121,295	2.97	1,344,055	9.01	1,465,054	6.19
Woolen goods	1,139,544	4.52	859,285	14.95	3,357,147	20.50	5,493,677	19.78
Worsted goods	<i>a</i> 1,486,728	<i>a</i> 10.82	430,713	12.92	1,846,873	17.70	2,892,591	17.81
Other industries (66)	12,247,242	7.65	5,194,884	11.63	16,778,124	11.44	25,372,867	10.41
Total	13,473,509	3.13	11,392,852	9.30	33,027,444	10.31	56,793,448	10.27

a Increase.

The term “capital invested” used in compiling these statistics does not mean merely cash capital or capital stock, but includes all forms of capital devoted to production, such as notes, bills receivable, and value of land, machinery, and stock on hand or in process of manufacture. Inasmuch as some of the elements included as capital are variable from year to year, it follows that apparently wide fluctuations in the amount of capital invested will sometimes appear in the returns. A reduction in capital does not, of course, imply retrogression.

Four of the 9 leading industries show an increase and 5 a decrease in the amount of capital invested, the decrease for the 75 industries amounting to 3.13 per cent. A decrease is shown for wages, stock used, and value of goods made and work done in each of the 9 selected and for the total of the 75 industries.

The following comparative statement presents statistics for 1893 and 1894 concerning the number of employees and the average yearly wages paid in each of the 9 selected industries, and in the 66 other industries considered together. This and the two following statements, giving statistics of employees, include wage earners only; officers, clerks, or other salaried persons are not included.

EMPLOYEES AND AVERAGE WAGES IN 75 INDUSTRIES, 1893 AND 1894.

Industries.	Year.	Estab- lish- ments.	Number of employees.			Average wages per year.
			Average.	Smallest.	Greatest.	
Boots and shoes.....	1893.....	638	41,253	31,506	49,744	\$496.38
	1894.....	638	40,863	32,154	48,151	491.45
Carpetings.....	1893.....	11	4,335	1,917	5,031	366.56
	1894.....	11	3,744	1,983	4,667	355.06
Cotton goods.....	1893.....	148	71,506	59,729	76,711	343.29
	1894.....	148	68,235	55,164	76,094	320.42
Leather.....	1893.....	141	5,666	3,866	7,289	493.65
	1894.....	141	5,728	4,521	7,129	475.27
Machines and machinery.....	1893.....	322	15,806	11,772	19,108	544.94
	1894.....	322	13,581	10,688	16,140	535.81
Metals and metallic goods.....	1893.....	327	13,067	10,299	15,172	507.29
	1894.....	327	11,754	9,580	13,626	560.79
Paper and paper goods.....	1893.....	98	9,924	8,244	11,012	411.42
	1894.....	98	9,665	8,148	10,787	409.89
Woolen goods.....	1893.....	115	15,520	11,215	17,989	370.31
	1894.....	115	14,261	10,163	16,703	342.75
Worsted goods.....	1893.....	21	9,404	6,979	10,790	^a 354.28
	1894.....	21	9,222	5,590	11,275	314.89
Other industries (66).....	1893.....	2,272	94,387	68,734	115,917	^b 437.36
	1894.....	2,272	86,345	68,432	105,595	457.28
Total.....	1893.....	4,093	280,868	214,261	328,763	436.13
	1894.....	4,093	263,398	206,423	310,167	421.81

^a Figures here apparently should be \$354.60; those given are, however, according to the original.

^b Figures here apparently should be \$473.36; those given are, however, according to the original.

The total for the 75 industries given in the above statement shows a decrease for 1894 in the average, greatest, and smallest number of persons employed, and in the average annual wages. The decrease in the average wages amounted to \$14.32, or 3.28 per cent.

Considering the total for the 75 industries, the per cent of males and females of the whole number employed at each specified weekly rate of wages is shown in the following statement:

PER CENT OF MALES AND FEMALES OF THE WHOLE NUMBER EMPLOYED AT SPECIFIED WEEKLY WAGES, 1893 AND 1894.

Weekly wages.	1893.		1894.	
	Males.	Females.	Males.	Females.
Under \$5.....	37.64	62.36	36.51	63.49
\$5 or under \$6.....	34.47	65.53	35.42	64.58
\$6 or under \$7.....	43.39	56.61	48.11	51.89
\$7 or under \$8.....	57.03	42.97	58.77	41.23
\$8 or under \$9.....	63.50	36.50	66.02	33.98
\$9 or under \$10.....	79.03	20.97	81.35	18.65
\$10 or under \$12.....	84.85	15.15	87.08	12.92
\$12 or under \$15.....	93.25	6.75	93.28	6.72
\$15 or under \$20.....	97.02	2.98	96.82	3.18
\$20 or over.....	99.07	.93	98.00	2.00
Total.....	66.28	33.72	65.49	34.51

From the above statement it appears that the proportion of males in each wage class increases after the “\$5 or under \$6” wage limit is passed, while the proportion of females correspondingly declines.

In the following statement, which comprises the 75 industries, the total number of males, the total number of females, and the total number of employees of both sexes are each considered as representing 100 per cent, and the number of employees in each wage class constitutes parts of this aggregate.

PER CENT OF THE TOTAL MALES AND FEMALES EMPLOYED AT SPECIFIED WEEKLY WAGES, 1893 AND 1894.

Weekly wages.	1893.			1894.		
	Males.	Females.	Total.	Males.	Females.	Total.
Under \$5.....	7.50	24.41	13.20	8.56	28.27	15.36
\$5 or under \$6.....	4.79	17.89	9.21	5.71	19.76	10.56
\$6 or under \$7.....	7.55	19.37	11.54	8.86	18.14	12.06
\$7 or under \$8.....	9.00	13.33	10.46	9.72	12.95	10.84
\$8 or under \$9.....	8.69	9.82	9.07	8.72	8.51	8.65
\$9 or under \$10.....	12.87	6.71	10.79	12.25	5.33	9.86
\$10 or under \$12.....	14.67	5.15	11.46	14.05	3.95	10.56
\$12 or under \$15.....	17.10	2.43	12.15	16.04	2.19	11.26
\$15 or under \$20.....	13.36	.81	9.13	11.91	.74	8.06
\$20 or over.....	4.47	.08	2.99	4.18	.16	2.79
Total	100.00	100.00	100.00	100.00	100.00	100.00

The following comparative statement shows the average proportion of business done and the average number of days in operation for the 9 selected industries and for the 66 other industries considered together, in 1893 and 1894. The proportional amount of business done was computed by considering the maximum production—that is to say, the greatest amount of goods that can be turned out with the present facilities—as representing 100 per cent.

AVERAGE PROPORTION OF BUSINESS DONE AND AVERAGE DAYS IN OPERATION IN 75 INDUSTRIES, 1893 AND 1894.

Industries.	Number of establishments.	Average proportion of business done.		Average days in operation.	
		1893.	1894.	1893.	1894.
Boots and shoes.....	638	59.19	59.76	275.99	279.16
Carpetings.....	11	69.27	61.55	247.53	259.15
Cotton goods.....	148	85.97	79.58	281.87	273.08
Leather.....	141	61.60	63.34	280.09	291.59
Machines and machinery.....	322	60.12	53.84	287.42	283.30
Metals and metallic goods.....	327	59.96	56.93	267.91	266.91
Paper and paper goods.....	98	74.72	61.65	278.37	273.21
Woolen goods.....	115	75.43	73.81	265.01	262.70
Worsted goods.....	21	77.05	75.33	278.53	270.90
Other industries (66).....	2,272	59.49	57.29	280.27	278.53
Total.....	4,093	61.49	59.06	278.40	275.63

In the 4,093 establishments making returns in each year, the proportion of business done in 1893 is represented by 61.49 per cent, and in 1894 by 59.06 per cent. Fifteen industries reported a larger proportion of business done in 1894.

The average number of days in operation during 1893 was, for all

industries, 278.40, and during 1894, 275.63, a decrease of 2.77 days, or 0.99 per cent. Thirty-six of the 75 industries considered show an increase in the average number of days in operation in 1894 as compared with 1893.

The actual product per \$1,000 of capital invested in each of the 9 leading industries of the State, with the average product per employee, the percentages of industry product paid in wages, and the percentages devoted to other expenses, is shown in the following statement for 1894.

By industry product is meant the actual result of the productive forces in the industry; that is, the added value created above the value of stock and materials consumed. This product was obtained by deducting from the total value of goods made and work done the value of stock used. In the division of the proceeds of each industry, one part of the industry product is paid to the labor force in the form of wages. The balance constitutes a fund from which are paid freights, insurance, interest on loans and stock, rents, commissions, salaries, etc., in fact, all expenses other than those for stock and wages. The remainder, if any, is the profit of the employer.

INDUSTRY PRODUCT, WAGES, AND PROFIT AND EXPENSES IN NINE SPECIFIED INDUSTRIES, 1894.

Industries.	Industry product.	Wages.	Profit and expense fund.	Industry product.		Per cent of industry product.	
				Per \$1,000 of capital.	Average per employee.	Paid in wages.	Devoted to profit and expenses.
Boots and shoes	\$33, 943, 486	\$20, 082, 006	\$13, 861, 480	\$1, 299. 23	\$830. 67	59. 16	40. 84
Carpetings	2, 139, 131	1, 329, 350	809, 781	293. 95	571. 35	62. 14	37. 86
Cotton goods	33, 091, 913	21, 863, 643	11, 228, 270	290. 25	484. 97	66. 07	33. 93
Leather	4, 566, 155	2, 722, 360	1, 843, 795	547. 22	797. 16	59. 62	40. 38
Machines and machinery	13, 809, 413	7, 276, 856	6, 532, 557	454. 05	1, 016. 82	52. 69	47. 31
Metals and metallic goods	10, 177, 044	6, 591, 555	3, 585, 489	525. 47	865. 84	64. 77	35. 23
Paper and paper goods	8, 647, 720	3, 961, 597	4, 686, 123	347. 55	894. 75	45. 81	54. 19
Woolen goods	9, 265, 047	4, 887, 984	4, 377, 063	384. 53	649. 68	52. 76	47. 24
Worsted goods	4, 759, 832	2, 903, 940	1, 855, 892	312. 62	516. 14	61. 01	38. 99

The following comparative statement shows the value of goods made and work done as reported by 857 identical establishments in each year from 1885 to 1894, inclusive:

VALUE OF GOODS MADE AND WORK DONE, 1885 TO 1894.

Year.	Value.	Increase.	
		Amount.	Per cent.
1885	\$209, 500, 026	.....	.....
1886	239, 261, 482	\$29, 761, 456	14. 21
1887	253, 590, 055	14, 328, 573	5. 99
1888	261, 009, 722	7, 419, 667	2. 93
1889	270, 018, 630	9, 008, 908	3. 45
1890	280, 482, 516	10, 463, 886	3. 88
1891	284, 042, 915	3, 560, 399	1. 27
1892	296, 563, 113	12, 520, 198	4. 41
1893	271, 222, 640	a 25, 340, 473	a 8. 54
1894	239, 816, 588	a 31, 406, 052	a 11. 58

a Decrease.

In the following comparative statement a similar showing is made for 3,073 identical establishments reporting in each of the five years from 1890 to 1894, inclusive:

VALUE OF GOODS MADE AND WORK DONE, 1890 TO 1894.

Year.	Value.	Increase.	
		Amount.	Per cent.
1890	\$508,142,367	.....	.....
1891	517,274,796	\$9,132,429	1.80
1892	547,924,725	30,649,929	5.93
1893	504,017,695	<i>a</i> 43,907,030	<i>a</i> 8.01
1894	449,675,930	<i>a</i> 54,341,765	<i>a</i> 10.78

a Decrease.

RECENT FOREIGN STATISTICAL PUBLICATIONS.

Report of the Royal Commission on the Liquor Traffic in Canada.
vi, 1,003 pp.

The object of this commission, which was authorized March 14, 1892, was to obtain the fullest and most reliable data possible respecting "the effect of the liquor traffic upon all interests affected by it in Canada; the measures which have been adopted in this and other countries with a view to lessen, regulate, or prohibit the traffic; the results of these measures in each case; the effect that the enactment of a prohibitory liquor law in Canada would have in respect of social conditions, agricultural business, industrial and commercial interests, of the revenue, requirements of municipalities, provinces, and of the Dominion, and also as to its capability of efficient enforcement; all other information bearing upon the question of prohibition."

The report proper comprises one volume of 1,003 pages. Numerous witnesses were examined by the commission in the provinces of Ontario, Manitoba, the Northwest Territories, British Columbia, and in the United States. The evidence is contained in five volumes, having a total of 5,617 pages.

The interests affected by the liquor traffic in Canada are so varied, numerous, and extensive, and the data available so limited, that the commission was unable to do more than refer to the most prominent of these interests and to supply such information in regard to them as they were able to procure.

During the five years from 1889 to 1893 there were manufactured in the Dominion, on an average each year, 4,538,000 gallons of whisky and 17,150,000 gallons of beer and ale. Estimating the value of the whisky at 60 cents and of the beer and ale at 30 cents per gallon, and of the cattle feed and refuse products sold at \$800,000, the total value of the annual product of the establishments manufacturing spirits and beer would be \$8,667,800.

To illustrate further the extent of the interests affected by the industry, an estimate is presented of the values of the products of other industries, such as cooperage, fuel, certain farm crops, transportation, etc., affected by the traffic. The estimates of the various amounts paid

annually by the distilleries and breweries in the Dominion are summarized as follows:

Raw materials, the products of the farm.....	\$2, 382, 765
Wages.....	1, 194, 046
Fuel.....	170, 000
Transportation	450, 000
Casks, bottles, cases, etc.....	206, 455
Capsules, corks, etc.....	76, 186
Printing, advertising, show cards, etc.....	79, 897
Repairs, blacksmiths' work, etc.....	47, 005
Insurance.....	151, 685
Taxes, gas, water supplies, etc.....	123, 118
Ice	36, 757
Sundries.....	121, 992
Total	5, 039, 906

There was paid annually \$1,038,671 for imported materials, leaving \$4,001,235 as the sum paid for Canadian products, wages, etc.

There are, based on an average for five years, 2,001,318 gallons of spirits, malt liquors, and wines imported annually into the Dominion, which are valued at \$1,736,897.

Taking an average of the total amount of spirits, wine, and malt liquors entered for consumption for the five years ending with June, 1893, it was found to be 21,676,749 gallons per annum. The average population for the same period was 4,834,876, making the per capita consumption 4.48 gallons. The valuation of the annual consumption was placed at \$15,030,064. Taking an average of the quantities of wine, spirits, and malt liquors entered for consumption in the five years ending 1893, but excluding cider and native wines, and taking an average of the retail prices, the calculation shows the sum of \$39,879,854 to be paid for liquor by the consumers.

The total annual Government revenue derived from the traffic, based on the reports for five years, is given at \$7,101,557.22.

How much of the crime, poverty, and insanity of the country is to be attributed to the use of intoxicating liquors could not be accurately determined.

The average number of convictions per year to each 1,000 of population for different offenses is shown in the following statement:

CONVICTIONS PER 1,000 OF POPULATION, 1881 TO 1893.

Periods.	For drunkenness.	For offenses against liquor laws.	Total.	All convictions.
Five years ending 1885.....	2.49	0.42	2.91	7.14
Five years ending 1890.....	2.72	.69	3.41	7.87
Three years ending 1893	2.46	.48	2.94	7.40

In summarizing, it is stated that the statistics show—

1. An increase in the number of insane.
2. A decrease in the number of commitments to the common jails, and of those remaining therein.

3. A decrease in the number of population in the reformatories of Ontario and Quebec.

4. A decrease in the number of those arrested for offenses in the principal cities and towns, more particularly in those arrested for drunkenness.

5. An increase in the number of convictions for offenses of all kinds, comparing the five years ended 1890 with the five years ended 1885, but a decrease in the convictions per 1,000 of the population in the three years ended 1893 as compared with those for the five years ended 1890, and a steady reduction in the yearly ratios from 1889 to 1893.

The returns for the earlier years for which the statistics are given are supposed to be less accurate than those for the later ones.

6. Taking the statistics of convictions for drunkenness for the whole Dominion, it will be found that the average for the five years ended 1885 was 2.49 per 1,000 of the population. In the five years ended 1890, during the greater portion of which the Scott act^(a) was in force in a large number of counties in Ontario, the average was 2.72 per 1,000 of the population. In the three years ended 1893, the average per 1,000 fell to 2.46. The highest ratios were in the years 1889 and 1890. These were the years immediately following the abandonment of the Scott act throughout the counties in Ontario. In them the ratio was 2.94, and from that point there was a gradual reduction until, in 1893, the ratio reached 2.35 per 1,000.

7. The statistics of the committals to, and those remaining in, the penitentiaries of the Dominion show a large decrease in the period between 1880 and 1893.

It was found impracticable to make a summarization of the legislation affecting the liquor traffic or of the results of such legislation. The elaborate detail presentation concerning this, as well as the other features of the inquiry, should be consulted to obtain a correct idea of the subjects discussed.

Annual Report of the Bureau of Industries for the Province of Ontario, 1894. C. C. James, Secretary. Published by Ontario Department of Agriculture. xvi, 339 pp.

This report is for the year 1894, and presents statistics on the following subjects: Weather and the crops, 58 pages; live stock, the dairy, and the apiary, 42 pages; values, rents, and farm wages, 39 pages; loan and investment companies, 28 pages; chattel mortgages, 4 pages; municipal statistics, 174 pages.

WEATHER AND THE CROPS.—Tables giving temperature, sunshine, and precipitation, as observed at various well-distributed points throughout the province, furnish an interesting exhibit of weather conditions for the years 1893 and 1894, also the average for thirteen years (1882 to 1894) for temperature and precipitation, and for twelve years (1883 to 1894) for sunshine.

There were 23,038,974 acres of land assessed in the rural area of the province during 1894, of which 12,292,610 acres were cleared, there remaining 7,859,714 acres in woodland and 2,886,650 acres in swamp,

^a The Canadian temperance law of 1878, based on the principle of local option.

marsh, or waste land. There were 2,703,241 acres in pasture during the year and 8,215,153 in crops. The average number of acres per year sown in crops during the period from 1882 to 1894, inclusive, was 7,655,848. The acreage and yield of the principal crops is shown in the following statement:

ACREAGE AND YIELD OF FARM PRODUCTS, 1894.

Products.	Acres.	Yield in bushels.	
		Total.	Average per acre.
Fall wheat	778,992	16,512,106	21.2
Spring wheat.....	230,016	3,367,854	14.6
Barley	486,261	10,980,404	22.6
Oats.....	2,330,766	69,867,716	30.0
Rye	90,144	1,386,606	15.4
Pease.....	785,007	14,022,888	17.9
Corn, for husking	267,348	16,275,352	60.9
Corn, for silo and fodder.....	111,361	α 1,049,764	α 9.43
Buckwheat.....	145,268	2,534,335	17.4
Beans	59,281	827,514	14.0
Potatoes.....	167,253	17,163,130	102.6
Mangel-wurzels	27,670	11,532,127	416.8
Carrots.....	11,186	3,716,140	332.2
Turnips	147,657	61,694,487	417.8
Hay and clover.....	2,576,943	α 3,575,200	α 1.39

α Tons.

LIVE STOCK, THE DAIRY, AND THE APIARY.—Some of the totals for the statistics of 1894, given under this title, are shown in the following summarized statement:

Horses, number.....	674,777
Hogs, number.....	1,142,133
Horned cattle, number	2,099,301
Sheep, number.....	2,015,805
Wool clip:	
Number of fleeces.....	1,092,467
Pounds of wool.....	6,235,036
Pounds of wool per fleece.....	5.71
Poultry, number of fowls.....	7,552,662
Cheese factories:	
Number reporting	1,011
Milk used, pounds	1,027,577,831
Cheese made, pounds.....	97,284,547
Gross value of cheese	\$9,441,247
Creameries:	
Number reporting.....	39
Butter made, pounds.....	1,072,517
Value of butter.....	\$224,605
Apiary outfit:	
Hives of bees, number.....	200,094
Value of outfit.....	\$1,051,574

VALUES, RENTS, AND FARM WAGES.—The total values of farm property for 1894 are summarized in the following statement:

Farm land	\$587,246,117
Buildings	204,071,566
Implements	51,530,172
Live stock on hand.....	111,547,652
Total	954,395,507

The total value of live stock sold during the year amounted to \$31,935,589. Based upon market prices, the total value of crops for the year aggregated \$94,055,392.

The average value of a rented farm, including buildings, in 1894 was \$5,297; the average rental \$238, or 4.49 per cent of the value of land and buildings. The area of a rented farm averaged 127 acres, with 90 acres cleared.

The average annual wages for farm laborers in 1894 is given at \$156 with board, and \$247 without board. The average monthly wages for the working season are reported at \$16.55 with, and \$25.61 without board. Domestic servants on farms average \$6.23 per month.

LOAN AND INVESTMENT COMPANIES.—The following statement gives totals for the loan and investment companies of the province as reported for the years 1893 and 1894:

LOAN AND INVESTMENT COMPANIES, 1893 AND 1894.

Items.	1893.	1894.
Number of companies	86	89
Capital subscribed.....	\$88, 582, 985	\$94, 047, 711
Liabilities to stockholders.....	49, 285, 824	50, 582, 921
Liabilities to the public.....	84, 916, 664	86, 958, 820
Total liabilities.....	134, 202, 488	137, 541, 741
Secured loan assets.....	118, 040, 915	120, 229, 818
Property assets.....	16, 161, 573	17, 311, 923
Total assets	134, 202, 488	137, 541, 741

CHATTEL MORTGAGES.—During the year ending December 31, 1894, there were 21,759 chattel mortgages, representing \$11,220,205, on record in the province and undischarged. Of this number 11,687, representing \$3,446,884, were against farmers. In 1893 the chattel mortgages numbered 19,722 and represented \$9,333,385, of which 10,684, representing \$3,059,857, were against farmers.

MUNICIPAL STATISTICS.—The details presented for the municipal statistics of the province for the year 1893 are summarized in the following statement:

Population	1, 910, 059
Total assessed valuation.....	\$825, 530, 052. 00
Taxes imposed for all purposes	12, 522, 660. 00
Rate per head.....	6. 56
Mills on the dollar.....	15. 17
Bonded debt.....	48, 083, 243. 00
Rate per head.....	a 28. 17
Floating debt.....	6, 796, 422. 00
Interest paid on loans and debentures	2, 508, 691. 00

a Figures here apparently should be \$25.17; those given are, however, according to the original.

Die Arbeitseinstellungen im Gewerbebetriebe im Jahre 1893 (Beilage der "Statistischen Monatschrift," 1894). *Die Arbeitseinstellungen im Gewerbebetriebe in Österreich Während des Jahres 1894.* Herausgegeben vom Statistischen Departement im k. k. Handelsministerium. 31, 128 pp.

The Austrian Government has been collecting statistics of strikes each year since 1891. Those for the years 1891 and 1892 were printed by the Government, but not for general distribution. The report for 1893 was published in the form of a supplement to the monthly statistical bulletin, *Statistische Monatschrift*. The last report, for 1894, is the first that appeared in the form of a special report of the bureau of statistics of the Imperial Ministry of Commerce.

The statistics for 1891 and 1892 appeared in Bulletin No. 1 of the Department of Labor, in an article on strikes in Austria. The article was prepared from data obtained from Volume XI of the foreign reports of the British Royal Commission on Labor. The statistics presented in the present article are obtained from the above-mentioned official reports of the Austrian Government.

The strike statistics in these reports do not cover agricultural, forestry, or mining industries. These will be separately treated in a report soon to be published by the Austrian Minister of Agriculture.

The statistics for the two years here presented were collected according to such different methods, that it will be necessary to show the information in separate tables for each year. The report for 1893 embraces but two general tables, one showing strikes according to localities, and the other by industries affected. The essential features of the second are reproduced in the following table:

STRIKES IN 1893, BY INDUSTRIES.

Industries.	Strikes.	Estab-lish-ments.	Employees.			Cause or object.			Result.		
			Total.	Strik-ers.	Days lost.	For in-crease of wages or that and other de-mands	Against reduc-tion of wages.	All other.	Suc-ceeded	Suc-ceeded partly.	Failed.
Building	10	249	12, 405	9, 892	209, 155	7	.....	3	.....	6	4
Brewing	7	16	1, 225	222	3, 067	7	.....	.....	1	2	4
Stonecutting	1	135	700	700	52, 500	1	.....	.....	.....	1	.....
Dyeing, bleach-ing, and finish-ing.....	7	18	1, 291	1, 182	19, 109	5	.....	2	4	1	2
Board sawing	1	1	44	19	38	1	.....	.....	.....	.....	1
Printing	3	3	48	31	88	.....	.....	3	.....	.....	3
Paper-box mak-ing.....	1	1	85	70	350	1	.....	.....	.....	1	.....
Cement	1	1	30	27	54	.....	.....	1	.....	.....	1
Piano	1	1	55	55	935	1	.....	.....	.....	.....	1
Wood turning....	10	37	570	370	10, 153	7	.....	3	1	2	7
Ribbon printing.	1	1	196	150	1, 350	1	.....	.....	.....	1	.....
Gas and water works.....	1	1	33	33	66	1	.....	.....	.....	.....	1
Glass and ce-ramics	9	229	3, 617	2, 051	32, 580	2	6	1	.....	2	7
Rubber goods ...	2	2	1, 053	243	3, 288	2	.....	.....	.....	2	.....
Hats	3	3	574	248	534	.....	2	1	1	.....	2
Cartographing and litho-graphing.....	1	1	39	22	396	.....	.....	1	.....	.....	1

STRIKES IN 1893, BY INDUSTRIES—Concluded.

Industries.	Strikes.	Estab- lish- ments.	Employees.			Cause or object.			Result.		
			Total.	Strik- ers.	Days lost.	For in- crease of wages or that and other de- mands	Against reduc- tion of wages.	All other.	Suc- ceeded	Suc- ceeded partly.	Failed.
Coal handling...	1	1	1,000	1,000	12,000	1	.....	.....	.....	1	.....
Leather	14	48	1,963	1,790	50,634	12	1	1	1	10	3
Machinery	8	8	2,175	222	1,040	2	.....	6	1	1	6
Metal	18	56	1,685	1,299	14,493	6	2	10	6	5	7
Mineral oil and lard refining, and candle making	1	1	232	190	1,520	1	.....	.....	.....	1	.....
Flour milling....	2	9	88	78	1,452	.....	.....	2	.....	1	1
Paper ruling	1	1	29	8	16	.....	.....	1	.....	.....	1
Cleaning works ..	1	1	20	20	40	1	.....	.....	1	.....	.....
Tailoring.....	3	256	502	489	2,415	3	.....	.....	.....	3	.....
Shoemaking.....	4	4	681	526	1,778	4	.....	.....	2	.....	2
Sulphuric acid and fertilizing works.....	1	1	83	40	40	1	.....	.....	.....	.....	1
Textiles.....	43	43	14,128	6,423	90,771	22	8	13	12	9	22
Furniture and cabinetmaking	11	36	546	523	6,577	9	.....	2	2	3	6
Linen goods.....	1	1	81	42	672	1	.....	.....	.....	1	.....
Bricks and tiles ..	2	2	156	6	10	1	1	.....	1	.....	1
Painting and decorating	1	36	100	50	400	.....	.....	1	.....	1	.....
Whitewashing ..	1	4	105	99	990	1	.....	.....	.....	1	.....
Total.....	172	1,207	45,539	28,120	518,511	101	20	51	33	55	84

The report for 1894 goes more into details concerning strikes, with the exception, however, that industries are given in more comprehensive groups. The tables embrace information concerning each strike, with separate recapitulations according to localities and industries, the number and character of strikes according to the months in which they began, the results of strikes according to their duration, and the results by causes. The information contained in these tables is also much more carefully analyzed in the text preceding them than in the report for 1893. The two following tables give the same information as that for 1893, though somewhat more in detail, concerning strikes in 1894:

STRIKES IN 1894, BY INDUSTRIES.

Industries.	Strikes.	Establish- ments.	Total em- ployees.	Strikers.	Strikers reem- ployed.	New em- ployees after strikes.
Stone, glass, china, and earthen ware...	22	130	7,717	6,415	6,235	104
Metal and metallic goods	23	38	4,606	2,752	2,522	165
Machinery and instruments	7	7	579	194	103	45
Wooden and caoutchouc goods.....	23	1,593	12,818	9,793	9,579	104
Leather, hides, brushes, and feathers...	9	19	765	641	421	107
Textiles	34	46	10,467	6,317	5,624	529
Paper hanging.....	1	145	422	194	194	.....
Wearing apparel and millinery	9	22	837	668	511	114
Paper.....	1	1	25	24	23	.....
Food preparations	7	97	1,021	299	283	14
Chemical works.....	2	2	1,612	1,268	468	932
Building trades.....	11	358	18,921	14,975	14,397	34
Printing and publishing	5	5	152	85	60	24
Power, heat, and light station	1	1	168	104	.....	100
Transportation	2	2	509	249	50	118
Other industries	2	2	99	97	97	.....
Total	159	2,468	60,718	44,075	40,567	2,390

DURATION AND RESULTS OF STRIKES IN 1894, BY INDUSTRIES.

Industries.	Duration of strikes.					Results of strikes.					
	10 days and under.	11 to 20 days.	21 to 30 days.	31 to 40 days.	Over 40 days.	Succeeded.		Succeeded partly.		Failed.	
						Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.
Stone, glass, china, and earthen ware.....	17	2	1	-----	2	6	27.27	10	45.46	6	27.27
Metal and metallic goods.....	15	3	1	3	1	6	26.09	6	26.09	11	47.82
Machinery and instruments.....	4	3	-----	-----	-----	-----	-----	-----	-----	7	100.00
Wooden and caoutchouc goods.....	16	3	1	1	2	8	34.78	6	26.09	9	39.13
Leather, hides, brushes, and feathers.....	5	2	-----	-----	2	3	33.33	1	11.11	5	55.56
Textiles.....	25	6	1	-----	2	2	5.88	10	29.41	22	64.71
Paperhanging.....	-----	1	-----	-----	-----	-----	-----	1	100.00	-----	-----
Wearing apparel and millinery.....	6	1	-----	1	1	4	44.45	3	33.33	2	22.22
Paper.....	1	-----	-----	-----	-----	-----	-----	-----	-----	1	100.00
Food preparations.....	7	-----	-----	-----	-----	2	28.57	2	28.57	3	42.86
Chemical works.....	2	-----	-----	-----	-----	-----	-----	-----	-----	2	100.00
Building trades.....	9	1	1	-----	-----	4	36.36	2	18.18	5	45.46
Printing and publishing.....	3	2	-----	-----	-----	3	60.00	-----	-----	2	40.00
Power, heat, and light station.....	1	-----	-----	-----	-----	-----	-----	-----	-----	1	100.00
Transportation.....	2	-----	-----	-----	-----	-----	-----	1	50.00	1	50.00
Other industries.....	2	-----	-----	-----	-----	1	50.00	1	50.00	-----	-----
Total.....	115	24	5	5	10	39	24.53	43	27.04	77	48.43

CAUSES OF STRIKES IN 1894, BY INDUSTRIES.

Industries.	Against reduc- tion of wages.	For in- crease of wages.	For regu- lar pay- ments	For re- duc- tion of hours	For dis- charge of fore- men, etc.	Against dis- charge of em- ployees	For re- instat- ement of dis- charged em- ployees	Against obnox- ious rules.	For Labor Day, May 1.	Other causes	Total.
Stone, glass, china, and earthen ware...	2	17	-----	4	-----	-----	-----	-----	5	9	37
Metal and metallic goods.....	4	12	-----	6	4	7	5	-----	6	10	54
Machinery and instruments.....	-----	3	-----	-----	2	-----	4	-----	-----	1	10
Wooden and caoutchouc goods.....	5	14	-----	8	-----	1	5	-----	4	10	47
Leather, hides, brushes, and feathers.....	-----	5	-----	3	2	-----	1	-----	2	4	17
Textiles.....	3	16	1	8	3	7	7	-----	5	21	71
Paper hanging.....	-----	1	-----	1	-----	-----	-----	-----	1	-----	3
Wearing apparel and millinery.....	2	7	-----	3	2	4	1	-----	1	6	26
Paper.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	1
Food preparations.....	-----	4	-----	3	1	-----	-----	-----	-----	5	13
Chemical works.....	-----	-----	-----	-----	-----	-----	2	-----	-----	-----	2
Building trades.....	-----	5	2	4	-----	-----	2	1	-----	3	17
Printing and publishing.....	1	-----	-----	1	1	2	1	-----	-----	2	8
Power, heat, and light station.....	-----	1	-----	-----	1	1	-----	-----	-----	1	4
Transportation.....	-----	2	-----	1	-----	-----	-----	-----	-----	1	4
Other industries.....	1	1	-----	1	-----	1	-----	-----	-----	-----	4
Total (a).....	18	88	3	43	16	23	28	1	24	74	318

a A considerable number of strikes were due to two or three causes, and the facts in such cases have been tabulated under each cause. Hence the totals for this table necessarily do not agree with those for the last table on page 295.

An analysis of these tables shows that a very large proportion of all the strikes occurred in the groups of building trades, wooden and caoutchouc goods, stone, glass, china, and earthen ware, and textiles. The exact extent to which each group figures is shown in the following statement of percentages:

Industries.	Per cent of strikes.	Per cent of days lost.
Building trades.	33.98	23.14
Wooden and caoutchouc goods	22.21	49.85
Stone, glass, china, and earthen ware.....	14.55	5.48
Textiles	14.33	8.05
Other industries.....	14.93	13.48

The duration of strikes was, in general, very short. Out of a total of 159 strikes, 115 lasted less than 11 days. The longest strike lasted 136 days, while the average duration was 11.68 days.

In giving the causes of strikes, the Austrian bureau has adopted a peculiar method of presentation. As strikes may, and usually do, result from a variety of causes, it has been thought preferable to use the cause instead of the strike as the unit. The table, therefore, shows the number of times that each cause figured as the incentive to a strike. Thus there is shown a total of 318 causes for 159 strikes.

It will be seen that the demands for an increase of wages and for a reduction of hours are by far the most frequent causes of strikes. Of the total of 318 causes, 88, or 27.67 per cent, were due to the former, and 43, or 13.52 per cent, to the latter cause.

The bureau has, however, also made a calculation of the causes of strikes according to the more usual method of using the strike as the unit. Such a presentation, together with the percentage of strikes due to each cause, is given in the following statement:

PER CENT OF STRIKES DUE TO EACH SPECIFIED CAUSE, 1894.

Cause.	Strikes.	
	Number.	Per cent.
Against reduction of wages.....	11	6.92
Against reduction of wages in connection with various other demands.....	7	4.40
For increase of wages	21	13.21
For increase of wages and reduction of hours.....	9	5.66
For increase of wages and reduction of hours in connection with other demands.....	24	15.09
For increase of wages in connection with other demands, but not including reduction of hours.....	34	21.38
For regular payments	2	1.26
For regular payments in connection with other demands.....	1	0.63
For reduction of hours	3	1.89
For reduction of hours in connection with other demands, but not including increase of wages.....	7	4.40
For discharge of foremen or superintendents.....	6	3.77
For discharge of foremen or superintendents in connection with other demands not specified above.....	3	1.89
For reinstatement of discharged employees.....	13	8.18
For reinstatement of discharged employees in connection with other demands not specified above.....	5	3.14
For Labor Day, May 1.....	1	0.63
Other demands	12	7.55
Total	159	100.00

It is thus seen that 21, or 13.21 per cent of all strikes, were due to the single demand for higher wages; 33, or 20.75 per cent, to demands for higher wages and shorter hours alone and in connection with other demands, and 34, or 21.38 per cent, to demands for higher wages in connection with other demands, not including reduction of hours.

Regarding the results of strikes, the first table for 1894 shows that 39, or 24.53 per cent of all strikes, were successful; 43, or 27.04 per cent were partly successful, and 77, or 48.43 per cent, were failures.

The most important information, however, that can be obtained concerning the results of strikes is that where they are shown according to the causes for which strikes were undertaken. It is possible to obtain this for the first time for the year 1894. This is done in the following table:

RESULTS OF STRIKES, BY CAUSES, 1894.

Cause.	Succeeded.			Succeeded partly.			Failed.			Total.		
	Strikes.	Es- tab- lish- ments	Strik- ers.	Strikes.	Es- tab- lish- ments	Strik- ers.	Strikes.	Es- tab- lish- ments	Strik- ers.	Strikes.	Es- tab- lish- ments	Strik- ers.
Against re- duction of wages	10	25	1, 525	-----	-----	-----	8	9	430	18	34	1, 955
For increase of wages...	20	74	3, 122	31	314	7, 510	37	1, 684	12, 779	88	2, 072	23, 411
For regular payments..	3	3	162	-----	-----	-----	-----	-----	-----	3	3	162
For reduc- tion of hours	15	41	1, 788	3	210	467	25	2, 013	26, 674	43	2, 264	28, 929
For dis- charge of foremen, etc	2	2	98	-----	-----	-----	14	14	1, 062	16	16	1, 160
Against dis- charge of employees .	6	6	479	-----	-----	-----	17	18	1, 851	23	24	2, 330
For rein- statement of dis- charged employees .	3	3	154	1	1	63	24	24	3, 184	28	28	3, 401
Against ob- noxious rules	1	9	295	-----	-----	-----	-----	-----	-----	1	9	295
For Labor Day, May 1.	6	10	4, 498	1	11	488	17	1, 732	10, 690	24	1, 753	15, 676
Other causes.	29	40	7, 089	8	83	1, 554	37	1, 943	25, 434	74	2, 066	34, 221
Total (b).	95	213	19, 210	44	619	10, 082	179	7, 437	82, 104	318	8, 269	111, 540 (a)

a These figures do not represent the totals as shown by the other columns; they are, however, given as reported.

b A considerable number of strikes were due to two or three causes, and the facts in such cases have been tabulated under each cause. Hence the totals for this table necessarily do not agree with those for some of the preceding tables.

As already explained, the systems of presentations of results for 1893 and 1894 differ so materially that a comparison of one year with another is difficult. However, from figures for the four years given in the last report, a reasonably accurate idea may be gained of the cause of strikes in Austria during that period, namely, 1891 to 1894, inclusive.

The following statement shows the number of strikes, strikers, establishments, etc., for each year:

STRIKES BY YEARS, 1891 TO 1894.

Items.	1891.	1892.	1893.	1894.
Strikes	104	101	172	159
Establishments affected.....	1,917	1,519	1,207	2,468
Employees in establishments	40,486	24,621	45,539	60,718
Strikers.....	14,025	14,123	28,120	44,075
Percentage of strikers of total employees	34.64	57.36	61.75	72.59
Total days lost.....	247,086	150,992	518,511	566,463

The above figures are significant. They show a decided and almost steady increase from year to year in the number of strikers, the percentage of employees striking, and the number of working days lost. Comparing the figures for 1891 and 1894, it is found that in every case they are greater for the last year than for the first year.

The last table, prepared from material contained in the reports, shows the number and percentage of strikes according to the principal causes and their results:

PER CENT OF STRIKES, BY CAUSES AND RESULTS, 1891 TO 1894.

Causes and results.	1891.		1892.		1893.		1894.	
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.
CAUSES.								
For increase of wages	26	25.00	19	18.81	38	22.09	21	13.21
Against reduction of wages	16	15.39	19	18.81	20	11.63	11	6.92
For increase of wages in connection with reduction of hours and other demands...	28	26.92	32	31.69	63	36.63	67	42.13
Reduction of hours alone, or in connection with other demands except increase of wages	7	6.73	9	8.91	5	2.91	10	6.28
For and against discharge of employees...	7	6.73	15	14.85	21	12.21	19	11.95
Other causes	20	19.23	7	6.93	25	14.53	31	19.50
RESULTS.								
Succeeded	19	18.63	26	25.74	33	19.18	39	24.53
Succeeded partly	29	28.43	29	28.71	55	31.98	43	27.04
Failed	54	52.94	46	45.55	84	48.84	77	48.43
Total strikes	a 104	100.00	101	100.00	172	100.00	159	100.00

a For two strikes results are not reported, hence they are omitted under "Strikes by results."

The above table shows that the percentage of strikes resulting from demands in reference to wages alone has decreased materially during the four-year period, while that of strikes resulting from demands for increase of wages in connection with reduction of hours and other demands has steadily increased. At the same time, the percentage of successful strikes has increased, while there was a corresponding decrease in the number of failures.

Fourth Annual Report of the Department of Labor of New Zealand. Hon. W. P. Reeves, Minister of Labor. 67 pp.

This report, which is for the year ending March 31, 1895, treats of the condition of the labor market; assistance rendered by the department in procuring employment; the establishment of labor colonies on State farms; the effect of certain features of the factory inspection and shops and shop-assistant's acts of 1894; labor disturbances; methods of dealing with the unemployed; reports of factory inspectors and wages and employees in various industries.

During the year the department assisted 2,007 married and 1,023 single men in finding employment. The total number of men assisted in this manner since the organization of the department is as follows:

MEN ASSISTED IN PROCURING EMPLOYMENT.

Year.	Number.	Persons dependent on them.
June 1, 1891, to March 31, 1892.....	2, 593	4, 729
April 1, 1892, to March 31, 1893.....	3, 874	7, 802
April 1, 1893, to March 31, 1894.....	3, 371	8, 002
April 1, 1894, to March 31, 1895.....	3, 030	8, 883
Total	12, 868	29, 416

Of the men assisted during the year ending March 31, 1895, there were 894 sent to private employment and 2,136 to Government works. The nonemployment of 3,004 of the number was due to slackness of trade and similar causes, while sickness was given as the reason for 26 cases. Of the persons dependent on those assisted, 2,007 were wives, 330 parents and others, and 6,546 children.

The provision of the factory inspection law of New Zealand, which makes it compulsory that the written permit of the inspector be conspicuously fastened to the wall of the room in which overtime is being worked, is proving a great safeguard. The requirement of the same law that all goods given out as piecework to be done in a private dwelling, or in any place not registered as a factory, shall have attached to it a printed label describing the place where the work was done and stating that it is an unregistered workshop, which label shall not be removed before the goods are finally sold, has had good effect in preventing owners of factories giving out material to be made up by people whose dwellings are unfit to be used as workshops for the manufacture of clothing. It has probably not prevented poor women from obtaining work, because where any two persons (such as mother and daughter, or two friends) choose to work together they can register as a factory, and their workshop be under proper inspection.

The number of persons working under the factories act was 29,879, of whom 22,324 were men and 7,555 women. This was an increase of 4,028 over the year ending March 31, 1894, the difference being mainly

caused by the wider grasp of the new act in including as factories all places where two persons work at a handicraft. The prior act made three persons the minimum for factory employment.

Histoire Économique de la Propriété, des Salaires, des Denrées et de Tous les Prix en Général, depuis l'An 1200 jusqu'en l'An 1800. Par le Vicomte G. d'Avenel. 2 vols.: xxvii, 726, 916 pp.

This work was at first undertaken as a purely private enterprise by the Vicomte d'Avenel. After awarding to it the Rossi prize in 1890 and in 1892, the Academy of Moral and Political Sciences, unable to publish it on account of its size, earnestly recommended that the Comité des Travaux Historiques, au Ministère de l'Instruction Publique, issue the work in the collection of Documents Inédits sur l'Histoire de France. Accepted by the latter, it therefore now appears as a public document.

The nature of the work is essentially documentary. In general the author may be said to have undertaken much the same work as that done for Great Britain by Mr. Thorold Rogers in his *History of Agriculture and Prices in Great Britain*. Of the 1,669 pages embraced within the two volumes, 521 pages only are devoted to introductory remarks and critical analysis, the remaining 1,148 pages consisting of quotations of prices, rents, etc. Of these latter pages all but 33 consist of a mere enumeration of particular quotations of prices, values, and rents. Each quotation shows the source whence derived, the locality, the date, the measure of the period, the quantity expressed in the measure now in use, the price expressed in the old measure quoted and the corresponding price expressed in the modern measure, and finally, the price in francs per unit of the measure in use at the present time. All the quotations concerning each article are given in one place, according to their dates, thus affording for each article a series of quotations in chronological order covering the entire period from 1201 to 1800. These general tables relate to (1) the value of different kinds of agricultural lands, (2) the value of houses at Paris and elsewhere in France, (3) the revenues derived from land, (4) the rents of houses, and (5) the prices of ordinary farm products and of bread.

In the concluding 33 pages the attempt is made to calculate the average value and revenue-producing power of land at different periods and the course of average prices of the more important cereals, both for particular provinces of France and for the whole country generally. The tables showing the average price of wheat for each year for which quotations could be obtained during the period 1201 to 1800, the same for rye, barley, and oats during the period 1601 to 1800, and for all four grains by periods 1201 to 1800, are of such general importance as to warrant their reproduction. As regards the single article of wheat, the second volume contains a chart prepared by M. Levasseur,

based on material contained in the present as well as other publications, showing graphically the course of prices during these six centuries.

AVERAGE PRICE PER BUSHEL OF WHEAT IN FRANCE, 1201 TO 1800.

Year.	Price.	Year.	Price.	Year.	Price.	Year.	Price.	Year.	Price.
1201.....	\$0. 203	1326.....	\$0. 493	1409.....	\$0. 294	1488.....	\$0. 228	1566.....	\$1. 087
1202.....	.322	1327.....	.489	1410.....	.393	1489.....	.171	1567.....	.971
1203.....	.162	1328.....	.507	1411.....	.274	1490.....	.335	1568.....	.974
1211.....	.231	1329.....	.459	1412.....	.137	1491.....	.214	1569.....	.946
1220.....	.277	1331.....	.360	1413.....	.192	1492.....	.182	1570.....	.771
1222.....	.324	1332.....	.452	1414.....	.207	1494.....	.159	1571.....	.914
1224.....	.171	1333.....	.584	1415.....	.270	1495.....	.171	1572.....	1. 090
1226.....	.524	1334.....	.371	1416.....	.358	1496.....	.173	1573.....	2. 069
1228.....	.303	1335.....	.127	1417.....	.176	1497.....	.236	1574.....	1. 508
1229.....	.174	1337.....	.326	1418.....	.442	1498.....	.202	1575.....	.963
1233.....	.204	1338.....	.154	1419.....	1. 422	1499.....	.336	1576.....	1. 032
1237.....	.595	1339.....	.407	1420.....	1. 032	1500.....	.202	1577.....	.736
1238.....	.317	1340.....	.325	1421.....	.883	1501.....	.339	1578.....	.749
1239.....	.473	1341.....	.535	1422.....	1. 035	1502.....	.268	1579.....	.849
1241.....	.171	1342.....	.224	1423.....	.737	1503.....	.127	1580.....	1. 075
1247.....	.441	1343.....	.569	1424.....	.282	1504.....	.211	1581.....	.771
1249.....	.372	1344.....	.608	1425.....	.457	1505.....	.312	1582.....	1. 002
1250.....	.743	1345.....	.292	1426.....	.443	1506.....	.117	1583.....	1. 007
1251.....	.218	1346.....	.748	1427.....	.460	1507.....	.158	1584.....	1. 109
1253.....	.394	1347.....	.540	1428.....	1. 311	1508.....	.262	1585.....	1. 112
1255.....	.280	1348.....	.758	1429.....	.609	1509.....	.197	1586.....	2. 227
1256.....	.583	1349.....	.565	1430.....	.707	1510.....	.093	1587.....	2. 888
1258.....	.398	1350.....	2. 049	1431.....	.509	1511.....	.155	1588.....	1. 396
1259.....	.318	1351.....	1. 133	1432.....	.745	1512.....	.150	1589.....	.936
1260.....	.205	1353.....	.318	1433.....	.694	1513.....	.188	1590.....	1. 651
1261.....	.554	1354.....	.619	1434.....	.476	1514.....	.250	1591.....	2. 380
1263.....	.224	1355.....	.330	1435.....	.243	1515.....	.468	1592.....	2. 312
1264.....	.148	1356.....	.511	1436.....	.274	1516.....	.311	1593.....	1. 783
1265.....	.373	1357.....	.212	1437.....	.579	1517.....	.322	1594.....	1. 209
1268.....	.112	1358.....	.958	1438.....	1. 133	1518.....	.594	1595.....	3. 177
1269.....	.596	1359.....	.915	1439.....	.851	1519.....	.201	1596.....	2. 985
1271.....	.628	1360.....	.529	1440.....	.361	1520.....	.237	1597.....	1. 849
1272.....	.602	1361.....	1. 059	1441.....	.265	1521.....	.587	1598.....	1. 554
1273.....	.136	1362.....	.326	1442.....	.437	1522.....	.461	1599.....	.832
1276.....	.152	1363.....	.900	1443.....	.468	1523.....	1. 326	1600.....	.568
1277.....	.182	1364.....	.628	1444.....	.238	1524.....	.624	1601.....	.741
1278.....	.197	1365.....	.516	1445.....	.208	1525.....	.398	1602.....	.828
1281.....	.333	1366.....	.644	1446.....	.190	1526.....	.207	1603.....	1. 013
1282.....	.531	1367.....	.488	1447.....	.205	1527.....	.528	1604.....	.950
1284.....	.080	1368.....	.318	1448.....	.119	1528.....	.580	1605.....	1. 084
1285.....	.762	1369.....	.867	1449.....	.214	1529.....	.777	1606.....	1. 024
1287.....	.240	1370.....	.660	1450.....	.186	1530.....	.549	1607.....	.853
1288.....	.169	1371.....	1. 450	1451.....	.179	1531.....	1. 606	1608.....	1. 455
1289.....	.250	1372.....	.310	1452.....	.112	1532.....	.756	1609.....	.890
1290.....	.484	1373.....	.536	1453.....	.120	1533.....	.418	1610.....	1. 033
1291.....	.642	1374.....	1. 048	1454.....	.236	1534.....	.335	1611.....	.934
1293.....	.662	1375.....	.345	1455.....	.616	1535.....	.531	1612.....	.979
1294.....	.516	1376.....	.316	1457.....	.335	1536.....	.420	1613.....	.788
1295.....	.645	1378.....	.374	1458.....	.280	1537.....	.424	1614.....	.986
1296.....	.380	1379.....	.224	1459.....	.226	1538.....	.298	1615.....	.759
1297.....	.302	1380.....	.192	1460.....	.172	1539.....	.618	1616.....	1. 035
1298.....	.484	1381.....	.162	1461.....	.542	1540.....	.360	1617.....	.921
1299.....	.884	1382.....	.272	1462.....	.183	1541.....	.414	1618.....	1. 172
1300.....	1. 020	1384.....	.258	1463.....	.148	1542.....	.375	1619.....	.697
1301.....	.350	1385.....	.340	1464.....	.125	1543.....	.517	1620.....	.829
1302.....	.380	1386.....	.227	1465.....	.154	1544.....	.671	1621.....	.704
1303.....	.373	1387.....	.169	1466.....	.245	1545.....	.483	1622.....	1. 242
1304.....	1. 192	1388.....	.214	1467.....	.144	1546.....	.461	1623.....	1. 366
1305.....	.466	1389.....	.364	1468.....	.127	1547.....	.315	1624.....	1. 691
1307.....	.569	1390.....	.380	1469.....	.144	1548.....	.394	1625.....	.931
1309.....	.367	1391.....	.441	1470.....	.087	1549.....	.551	1626.....	1. 649
1310.....	.216	1392.....	.478	1471.....	.141	1550.....	.390	1627.....	1. 032
1311.....	.687	1393.....	.596	1472.....	.095	1551.....	.823	1628.....	1. 107
1312.....	.571	1394.....	.498	1473.....	.154	1552.....	.456	1629.....	.970
1313.....	1. 711	1395.....	.150	1474.....	.226	1553.....	.457	1630.....	1. 353
1314.....	.363	1396.....	.336	1475.....	.134	1554.....	.509	1631.....	2. 322
1315.....	.840	1397.....	.289	1476.....	.277	1555.....	.482	1632.....	1. 763
1316.....	1. 472	1398.....	.309	1477.....	.252	1556.....	.824	1633.....	1. 479
1317.....	.388	1399.....	.340	1478.....	.280	1557.....	.550	1634.....	.868
1318.....	.534	1400.....	.171	1479.....	.092	1558.....	.507	1635.....	1. 453
1319.....	.547	1401.....	.320	1480.....	.463	1559.....	.558	1636.....	1. 898
1320.....	.612	1402.....	.224	1481.....	.375	1560.....	.679	1637.....	1. 887
1321.....	.381	1403.....	.316	1482.....	.539	1561.....	.608	1638.....	1. 109
1322.....	.779	1404.....	.185	1484.....	.291	1562.....	.947	1639.....	1. 523
1323.....	.408	1405.....	.414	1485.....	.208	1563.....	1. 408	1640.....	.808
1324.....	.728	1406.....	.284	1486.....	.405	1564.....	.534	1641.....	1. 225
1325.....	.306	1408.....	.196	1487.....	.240	1565.....	1. 017	1642.....	1. 142

AVERAGE PRICE PER BUSHEL OF WHEAT IN FRANCE, 1201 TO 1800—Concluded.

Year.	Price.	Year.	Price.	Year.	Price.	Year.	Price.	Year.	Price.
1643.....	\$1.645	1674.....	\$0.730	1705.....	\$0.513	1735.....	\$0.469	1768.....	\$1.033
1644.....	1.466	1675.....	1.268	1706.....	.465	1736.....	.549	1769.....	1.190
1645.....	.933	1676.....	.877	1707.....	.450	1737.....	.881	1770.....	1.105
1646.....	.741	1677.....	.607	1708.....	.669	1738.....	.736	1771.....	1.166
1647.....	1.189	1678.....	1.175	1709.....	2.198	1739.....	.954	1772.....	1.173
1648.....	1.039	1679.....	.973	1710.....	1.800	1740.....	1.109	1773.....	1.017
1649.....	1.570	1680.....	.928	1711.....	.833	1741.....	1.148	1774.....	.881
1650.....	1.598	1681.....	1.161	1712.....	1.298	1742.....	.745	1775.....	.964
1651.....	2.223	1682.....	.789	1713.....	1.460	1743.....	.529	1776.....	.789
1652.....	1.777	1683.....	.643	1714.....	1.660	1744.....	.565	1777.....	.871
1653.....	1.264	1684.....	.811	1715.....	.654	1745.....	.471	1778.....	.865
1654.....	.821	1685.....	1.058	1716.....	.670	1746.....	.548	1779.....	.921
1655.....	.816	1686.....	.541	1717.....	.561	1747.....	.827	1780.....	.762
1656.....	.771	1687.....	.709	1718.....	.610	1748.....	.640	1781.....	.914
1657.....	.780	1688.....	.420	1719.....	.760	1750.....	.834	1782.....	.958
1658.....	.835	1689.....	.663	1720.....	.999	1751.....	.885	1783.....	.922
1659.....	1.506	1690.....	.611	1721.....	.548	1752.....	.860	1784.....	1.290
1660.....	1.919	1691.....	.823	1722.....	.736	1753.....	.801	1785.....	1.020
1661.....	1.847	1692.....	.913	1723.....	1.027	1754.....	.573	1786.....	.866
1662.....	1.977	1693.....	1.713	1724.....	1.181	1755.....	.549	1787.....	.769
1663.....	1.056	1694.....	2.590	1725.....	1.398	1756.....	.830	1788.....	.827
1664.....	1.074	1695.....	.671	1726.....	.926	1757.....	.724	1789.....	1.362
1665.....	1.004	1696.....	.784	1727.....	.619	1758.....	.993	1790.....	1.159
1666.....	.947	1697.....	.739	1728.....	.523	1760.....	.846	1791.....	.861
1667.....	.881	1698.....	1.370	1729.....	.635	1761.....	.602	1793.....	2.112
1668.....	.576	1699.....	1.805	1730.....	.533	1762.....	.743	1794.....	.633
1669.....	.888	1700.....	.990	1731.....	.718	1763.....	.709	1795.....	1.067
1670.....	.550	1701.....	1.694	1732.....	.635	1765.....	.648	1796.....	1.051
1671.....	.888	1702.....	.719	1733.....	.415	1766.....	1.036	1798.....	.886
1672.....	.780	1703.....	.835	1734.....	.619	1767.....	.877	1800.....	1.041
1673.....	.745	1704.....	.722						

AVERAGE PRICE PER BUSHEL OF RYE, BARLEY, AND OATS IN FRANCE, 1601 TO 1800.

Year.	Prices.			Year.	Prices.		
	Rye.	Barley.	Oats.		Rye.	Barley.	Oats.
1601.....	\$0.586	\$0.463	\$0.363	1655.....	\$0.316	\$0.161	\$0.211
1602.....	.650			1656.....	.488		.563
1603.....	.696		.462	1657.....	.527		.240
1604.....	.521			1659.....			.235
1605.....	.406	.236	.163	1660.....	.540	.422	.311
1610.....	.422	.292	.260	1661.....	.781		
1614.....	.988	.209		1662.....	.887		.380
1615.....	.461	.311	.256	1663.....	.456		.248
1617.....	.952		.181	1664.....	.657		.241
1618.....		.581	.313	1665.....	.414	.311	.350
1619.....	.883		.294	1668.....			.426
1620.....	.633	.214	.198	1670.....	.313	.250	.172
1621.....	.718		.220	1673.....	.664	.541	
1623.....	.830		.305	1675.....	.449	.316	.210
1625.....	.533		.257	1676.....	.761	.527	.303
1626.....	1.049	.835	.482	1677.....	.184		.126
1627.....	1.088		.476	1678.....			.201
1628.....	.939			1680.....	.390	.320	.237
1629.....	.716		.254	1685.....	.511	.428	.241
1630.....	.879	.410	.276	1688.....	.354		.231
1631.....	1.739		.555	1690.....	.269	.171	.285
1632.....	.718			1691.....	.460		
1633.....	.888		.363	1692.....			.378
1634.....			.245	1694.....	2.547		
1635.....	.568	.360	.397	1695.....	.507	.327	.205
1637.....	.684		.481	1697.....	.258		.151
1638.....			.340	1698.....		1.094	.340
1639.....	.571		.341	1700.....	.685	.499	.283
1640.....	.319	.213	.163	1701.....	.575	.386	.281
1641.....	.752	.752	.441	1702.....	.362		.199
1643.....	1.226	1.226	.397	1704.....			.182
1644.....			.501	1705.....	.353	.212	.141
1645.....	.822	.822	.428	1706.....	.162		.150
1647.....			.112	1708.....	.260		.263
1648.....			.372	1709.....	1.349	1.881	1.628
1650.....	1.083	.898	.452	1710.....	1.093	.614	.305
1651.....	.432	.299	.250	1711.....	.744		
1652.....			.557	1713.....	1.338		.483
1653.....		.316	.561	1715.....	.413	.278	.233
1654.....			.189	1716.....	.373		

AVERAGE PRICE PER BUSHEL OF RYE, BARLEY, AND OATS IN FRANCE, 1601 TO 1800—Concluded.

Year.	Prices.			Year.	Prices.		
	Rye.	Barley.	Oats.		Rye.	Barley.	Oats.
1719.....	\$0. 437	.....	\$0. 127	1766.....	\$0. 841	\$0. 612	\$0. 223
1720.....	.489	\$0. 456	.299	1767.....	.499	.435	.236
1725.....	.862	.573	.286	1768.....	.....	.543	.262
1726.....	.424	.348	.194	1769.....	.655	.526	.234
1727.....	.....	.....	.165	1770.....	1. 007	.624	.349
1730.....	.294	.292	.248	1771.....	1. 017	.735	.245
1735.....	.220	.178	.162	1772.....	.....	.519	.418
1736.....	.....	.....	.145	1773.....	.731	.550	.251
1738.....	.848	.....	.....	1774.....	.628	.425	.225
1739.....	.518	.452	.192	1775.....	.796	.256	.201
1740.....	.622	.343	.258	1776.....	.624	.486	.321
1741.....	.....	.475	.256	1777.....	.535	.482	.284
1745.....	.236	.168	.165	1778.....	.705	.572	.231
1746.....	.....	.....	.152	1779.....	.781	.439	.161
1747.....	.575	.517	.340	1780.....	.552	.476	.332
1748.....	.379	.....	.359	1781.....	.826	.494	.338
1750.....	.441	.258	.193	1782.....	.881	.548	.284
1751.....	.538	.412	.257	1783.....	.632	.506	.246
1752.....	.765	.680	.700	1784.....	.717	.614	.442
1755.....	.349	.305	.189	1785.....	.898	.620	.396
1756.....	.843	.....	.....	1786.....	.690	.591	.349
1758.....	1. 058	.....	.204	1787.....	.618	.429	.365
1760.....	.689	.309	.260	1788.....	.642	.420	.273
1761.....	.353	.340	.129	1789.....	.921	.620	.387
1762.....	.581	.449	.195	1790.....	.815	.555	.439
1763.....	.371	.367	.187	1795.....	.742	.630	.979
1764.....	.784	.286	.137	1800.....	.639	.505	.398
1765.....	.469	.303	.210				

AVERAGE PRICE PER BUSHEL OF WHEAT, RYE, BARLEY, AND OATS IN FRANCE, 1201 TO 1800, BY PERIODS.

Period.	Prices.				Period.	Prices.			
	Wheat.	Rye.	Barley.	Oats.		Wheat.	Rye.	Barley.	Oats.
1201-1225	\$0. 258	\$0. 129	\$0. 088	\$0. 104	1526-1550	\$0. 476	\$0. 272	\$0. 252	\$0. 163
1226-1250 .....	.280	.256	.109	.092	1551-1575 .....	.816	.612	.408	.289
1251-1275 .....	.394	.340	.131	.087	1576-1600	1. 360	1. 068	.595	.422
1276-1300 .....	.436	.417	.237	.090	1601-1625 .....	.969	.680	.313	.255
1301-1325 .....	.589	.408	.272	.156	1626-1650	1. 292	.884	.612	.367
1326-1350 .....	.456	.340	.272	.204	1651-1675	1. 088	.585	.388	.306
1351-1375 .....	.612	.340	.224	.181	1676-1700 .....	.918	.612	.442	.238
1376-1400 .....	.317	.190	.136	.136	1701-1725	1. 007	.612	.592	.272
1401-1425 .....	.490	.238	.204	.129	1726-1750 .....	.748	.456	.326	.204
1426-1450 .....	.456	.313	.214	.160	1751-1775 .....	.901	.714	.499	.299
1451-1475 .....	.221	.156	.105	.071	1776-1800	1. 020	.714	.517	.469
1476-1500 .....	.272	.204	.110	.136	1890	1. 360	.816	.680	.612
1501-1525 .....	.272	.224	.194	.109					

Conseil Supérieur du Travail, Ministère de l'Agriculture, de l'Industrie et des Travaux Publics. 1^{re} Session, 1892: Application des Articles 4, 6, et 7 de la Loi du 13 décembre, 1889. 2^e Session, 1893, 1894, 1895. 1^{re} Partie: Minimum de Salaire. 2^e Partie: Durée du Travail dans les Briqueteries. 3^e Partie: Règlements d'Ateliers. 4^e Partie: Statistiques du Travail.

By royal order of April 7, 1892, the King of Belgium created, under the Department of Agriculture, Industry, and Public Works, a superior council of labor, to consist of 16 representatives of the employers of labor, 16 representatives of the laborers themselves, and 16 members selected on account of their special familiarity with industrial and social questions, or 48 members in all. The duties of this council were

specified to be: To give advice on all propositions relative to labor legislation; to investigate and report upon questions concerning labor conditions, such as apprenticeship, industrial education, factory rules, hygiene, and security of workingmen in factories and workshops; the organization of insurance against accidents; or, in a word, all matters concerning the relations between labor and capital, and, finally, to report upon the best means for the organization of a statistical service for the methodical collection of information concerning labor.

In pursuance of these instructions the council up to the present time has issued five reports, as enumerated above.

The first of these represents an investigation concerning the modifications that should be introduced in articles 4, 6, and 7 of the law of December 13, 1889, regulating the hours of labor and conditions of employment of men, women, and children in industrial establishments. The councils of industry and labor, created by the law of August 16, 1887, in all of the more important industrial centers of Belgium, were first called upon for a report on this question; and on the basis of the information thus obtained the superior council of labor prepared various propositions embodying the recommendations upon which its members were agreed. The reports of the different councils of industry and labor and the report of the deliberations and recommendations of the superior council make up the contents of the volume. No attempt is made to present the information gathered in a statistical form.

The second report presents a discussion had by the superior council of labor concerning a proposition making it obligatory upon the Government to insert in all contracts for public works a provision requiring the contractors to pay to their employees wages not inferior to a minimum amount as determined by the Government; in other words, to fix a minimum wage for all workingmen engaged on work for the Government. This proposition was finally rejected, expression being given at the same time to the opinion that the Government ought to encourage the payment of just wages. The fixing of minimum wages was declared to be the province of labor organizations, and it was highly desirable that labor should be better organized and therefore in a position to look after its own rights without the intervention of the State.

The third report relates to a consideration of the regulation of the employment of children in brick and tile works.

In the fourth report is given the results of an investigation of the question as to how far the State ought to intervene in the way of regulating the character of shop rules, the imposition of fines for their infraction, etc. A schedule of inquiries covering this subject was first addressed to all the councils of industry and labor, the answers to which served as a basis for the discussions by the council. The council incorporated their conclusions in the proposed law, the nature of which was to designate the points that ought to be covered by a set of shop rules, to provide means for their publicity, methods of enforcement, etc.

The fifth report of the council is devoted to a consideration of the

proper means of establishing in Belgium a service for the collection of statistics of labor. There is first given a reprint of a paper by Mr. Hector Denis, professor at the University of Brussels, on the organization of labor statistics. This is followed by special reports on the collection of labor statistics in the United States, in England, in Germany, Switzerland, France, and Italy. The report of the deliberations of the council follows, with the recommendation for the creation of a special statistical bureau for the collection of labor statistics.

Hygiène et Sécurité des Travailleurs dans les Ateliers Industriels: Législation Française et Étrangère. Office du Travail, Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes. C. Moron, Directeur de l'Office du Travail. 659 pp.

In this work the French labor bureau has made the effort to present a compendium of the laws and decrees of France and other countries, including the United States, which relate to the hygiene, security, and general conditions of labor of workingmen in industrial establishments. There is not included, however, such special legislation as relates to the conduct of particularly dangerous industries, as, for instance, those requiring the use of poisons, as lead, copper, sulphur, and phosphorous compounds, the regulation of steam engines, or the regulation of mining, transportation, the manufacture of explosives, etc. Legislation concerning these subjects will form the subject-matter for a subsequent report.

The present work consists of two distinct parts. In the first part is given an analysis and general study of the legislation of each country relating to the conditions under which industry must be carried on in order to show the successive stages through which this legislation has passed. Here the legislation of each country is treated under the following heads:

1. General sanitary regulations.
2. The regulation of dangerous and unhealthy industries, or those constituting a nuisance.
3. The employment of women and children.
4. The employment of adults.
5. The sanitation and security of workshops.
6. The responsibility of employers for accidents to their employees; insurance of workingmen against accidents.
7. The application of labor laws; their enforcement; inspection services; penalties.

In the second part there is reproduced in chronological order according to the date of their enactment, either in extenso or in summary form, the texts of laws and decrees of each country separately, relating to the matters analyzed in the preceding part. In the case of the United States, however, an exception is made. Instead of reproducing

the laws, reference is made to the compilation of labor laws issued by the United States Department of Labor, and two tables are introduced showing the regulations of each State concerning the employment of women and children, the inspection of factories, etc.

In general, all laws enacted prior to January 1, 1895, are included. Two detailed indexes are provided. The first, or analytical index, furnishes a list of the laws and decrees of each country according to the methodical order adopted in the analysis, with reference to the pages where they are analyzed. The second, or chronological index, gives a list of the laws and decrees of each country according to the order of the date of their enactment, with reference to the pages where they are reproduced.

The bureau announces its intention to continue the work here begun by the publication of periodical bulletins reproducing new legislation as it is enacted.

Les Syndicats Ouvriers aux États-Unis. Par M. Isidore Finance. Extrait du Rapport des Délégués Ouvriers, Exposition Internationale de Chicago, 1893. Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes. 214 pp.

This volume is a portion of the official report of a delegation of workingmen who visited America on the occasion of the World's Fair at Chicago in 1893, under the auspices of the French Government, to study the conditions of labor in the United States. It is devoted entirely to a history and description of those labor organizations in the United States which are of a national character. Two brief chapters are given, the one concerning the general history of the attempts of workingmen to form organizations, and the other on the general labor legislation of the United States, especially as it relates to the right of association. Each individual national labor organization is then taken up in turn in a separate chapter, and an account given of its organization, its principles, the dates and places of its annual conventions, and other important facts in its history. The histories of 57 organizations, commencing with those of the Knights of Labor and of the American Federation of Labor, are given in this way. Two concluding chapters give a description of the principles and work of building trades' councils, a sample workingman's budget (that of an employee of the building trades of New York City earning \$3.50 per day), and brief comments on some general features of the condition of organized labor in the United States.

The work appears to be based on original sources. It should be said that M. Finance, the author, is the chief of the division in the Office du Travail which relates particularly to labor legislation and labor organizations.

Étude sur les Derniers Résultats des Assurances Sociales en Allemagne et en Autriche: 1^e Partie, Accidents, 1894. 2^e Partie, Maladie, Invalidité, et Vieillesse, 1895. Office du Travail, Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes. C. Moron, Directeur de l'Office du Travail. 180, 229 pp.

The French labor bureau from the moment of its creation has followed closely the results of the operation of the laws of Germany and Austria providing for the compulsory insurance of workingmen against accidents, sickness, and old age and invalidity. The present volume is but the last of a series of special reports showing the results of the operation of the systems of insurance in these two countries. The prior volumes of this series are:

1. *Statistique des Accidents du Travail, d'après les rapports officiels sur l'assurance obligatoire en Allemagne et en Autriche, 1892. 124 pp.*
2. *Résultats Financiers de l'Assurance Obligatoire contre les Accidents du Travail en Allemagne et en Autriche, 1892. 110 pp.*
3. *Résultats Statistiques de l'Assurance Obligatoire contre la Maladie en Allemagne, 1893. 134 pp.*
4. *Résultats Statistiques de l'Assurance Obligatoire contre la Maladie en Autriche, 1893. 147 pp.*

These reports are not special studies, but are rather the summaries and analyses of the provisions of the laws relating to the insurance of workingmen, and the methodical presentation of the results of the systems as given in the annual official reports of the central insurance bureau of each country.(a)

The object of this report is to continue the work thus begun, and to present the results obtained since the last year comprehended in the prior reports. In the entire series there is, therefore, given not only an analysis of the various laws of Germany and Austria providing for the compulsory insurance of workingmen, but statistics of their operations since the inauguration of the system down to the latest date for which official data were obtainable.

Congrès International des Accidents du Travail et des Assurances Sociales.

1. *Comptes-Rendus et Rapports du 1^{er} Congrès à Paris, 1889, 2 vols.*
2. *Comptes-Rendus et Rapports du 2^e Congrès à Berne, 1891, 1 vol.*
3. *Comptes-Rendus et Rapports du 3^e Congrès à Milan, 1894, 2 vols.*
4. *Bulletin du Comité Permanent, 1890-1895, 6 vols. E. Gruner, Secrétaire Général.*

A number of special congresses in relation to social questions were organized in connection with the International Exposition of Paris in

a Amtliche Nachrichten des Reichsversicherungsamts, Berlin.

Die Gebarung und die Ergebnisse der Arbeiter-Unfallversicherungsanstalten, Wien.

Die Gebarung und die Ergebnisse der Krankheitsstatistik der Krankenkassen, Wien.

1889. Of these that in relation to accidents to labor and social insurance has been productive of by far the most important results. Two succeeding congresses have been held, the one at Berne in 1891, and the other at Milan in 1894. In addition to the published reports of these meetings, the permanent committee of the congress has published a quarterly bulletin since 1890. In these eleven volumes, representing the work of the congress up to the present time, is presented the most valuable body of literature relating to the question of accidents to labor and the insurance of workingmen against sickness, accidents, and old age that exists in any language.

Bulletin de la Société Française des Habitations à Bon Marché. M. Fleury-Ravarin, Secrétaire Général. 1890-1895, 6 vols.

The Société Française des Habitations à Bon Marché was founded at Paris December 17, 1889, as the direct result of the Congrès International des Habitations à Bon Marché held in connection with the International Exposition of Paris of that year. Its object is to encourage the construction by individuals, manufacturers, or local societies, of sanitary and cheap houses for workingmen, or the improvement of existing houses. It seeks especially to diffuse information concerning the best means for enabling workingmen to become the owners of their own homes.

To do this its mode of action is to place at the disposition of individuals or societies, plans, models of constitutions, forms of official papers, contracts of loan, sale, etc., and to act as a technical consulting commission whose advice, when sought, will be given gratuitously concerning any plans for the organization of societies or for the provision of workingmen's houses. All direct work by it in the way of making loans, the purchase of ground, or the erection of houses is formally prohibited by its constitution.

Its most important work is, therefore, the publication of a bulletin which has appeared regularly four times a year since 1890. The greater portion of the contents of this bulletin is given up to detailed descriptions of the operations of societies or individuals for the provision of workingmen's houses. These accounts embrace not only a general description of the extent of the work, but statements in detail of the cost of erection of the buildings, accompanied by elaborate architectural plans, copies of the constitutions of the societies, or the conditions under which they are occupied or can be acquired, and analyses of the financial results obtained. In this way the society not only presents information concerning what has been accomplished in the past, but reproduces plans, models of constitutions, etc., which may serve as an encouragement and guide to others wishing to undertake operations in the same field.

Bulletin de la Participation aux Bénéfices. Publié par la Société pour l'Étude Pratique de la Participation du Personnel dans les Bénéfices. 17^e Année, 1895.

The society for the practical study of profit sharing was organized in 1879, with the sole purpose, as indicated by its constitution, to disseminate information concerning all efforts for the practical application of profit sharing to industrial enterprises. As its principal means of action it has regularly published since its creation a bulletin, appearing four times a year, in which, in addition to other matter, it notices all additions to its technical library of works relating to profit sharing, and gives accounts of the operations of industrial concerns in which profit sharing is practiced.

Bulletin de l'Institut International de Statistique. Tome VIII, 1^{re} Livraison. Luigi Bodio, Secrétaire Général. cxvii, 343 pp.

This first part of Volume VIII of the publications of the International Statistical Institute is entirely devoted to a report of the proceedings, including the reproduction of the papers read, of the fourth session of the International Statistical Institute, held at Chicago, September 11-15, 1893. The list of papers or memoirs here presented is as follows:

1. Comparability of trade statistics of various countries, by A. E. Bateman.
2. Rapport fait au nom du comité pour la statistique de la navigation maritime [Report of the committee on statistics of maritime navigation], by A. N. Kiaer.
3. Results of recent investigations on prices in the United States, by Prof. F. W. Taussig.
4. The character and volume of the money of the United States, 1878-1893, by Maurice L. Muhleman.
5. Currency reform in Austria-Hungary, by Dr. Julius Mandello.
6. The national bank currency, by Charles A. Conaut.
7. Rapport fait au nom du comité des prix [Report of the committee on prices], by John B. Martin and R. H. Inglis Palgrave.
8. Rapport fait au nom du comité de la propriété foncière [Report of the committee on real estate], by P. G. Craigie.
9. Contribution statistique à la comparaison entre les transports par la navigation intérieure et par les chemins de fer [A contribution concerning the comparative statistics of transportation by internal waterways and railroads], by E. Cheysson.
10. Some recent results in railway statistics in the United States, by Henry C. Adams.
11. Geographical concentration, an historic feature of American agriculture, by John Hyde.
12. Railway statistics as applicable to earnings of passenger trains with a view of determining approximate revenue and deciding as to

number and time of trains to be run for the accommodation of the public, by M. Riebenack.

13. Railway freight traffic statistics, by C. P. Leland.

14. The course of wages in the United States since 1840, by Carroll D. Wright.

15. Bericht über die Fortschritte der Statistik in Oesterreich seit 1891 [Report on the progress of statistics in Austria since 1891], by Dr. Franz von Juraschek.

16. Ueber die Berechnung eines internationalen Sterblichkeitsmasses (Mortalitäts-Index) [Concerning the calculation of an international death rate (index of mortality)], by Joseph Körösi.

17. Die internationale Classificierung der Berufsarten [An international classification of occupations], by Joseph Körösi.

18. Liste des diagrammes et cartogrammes sur la femme en France, exposés à Chicago dans le "Woman Building," à la "World Fair" [List of diagrams and charts relating to woman in France, exhibited at Chicago in the Women's Building of the World's Fair], by Victor Turquan.

19. Census classifications of occupations in the United States, by Davis R. Dewey.

20. Statistical data for the study of the assimilation of races and nationalities in the United States, by Richmond Mayo-Smith.

21. The geographical distribution of the population of the United States, by Henry Gannett.

22. The condition and mode of statistics of marriage and divorce, by Samuel W. Dike.

23. Nomenclature des professions: Rapport sur les observations faites par différents directeurs de services statistiques, à propos du projet de nomenclature des professions présenté à leur examen par l'Institut International de Statistique (session de Vienne, 1891) [Nomenclature of occupations: Report on the observations made by different directors of statistical bureaus in regard to the proposition for a nomenclature of occupations presented to them for examination by the International Statistical Institute, Vienna meeting, 1891], by Dr. Jacques Bertillon.

24. Projet de nomenclature des professions [Proposed nomenclature of occupations], by Dr. Jacques Bertillon.

25. A preliminary report on anthropometry in the United States, by Edward Mussey Hartwell.

26. Remarks on the theory of anthropometry, by Franz Boas.

27. On the application to individual school children of the means derived from anthropological measurements by the generalizing method, by W. Townsend Porter.

28. Anthropometric statistics of Amherst College, by Edward Hitchcock.

29. An anthropometrical study of the effects of gymnastic training on American women, by Claës J. Enebuske.

30. Sur une statistique internationale du recensement de la population [Concerning an international census of population], by Dr. Jacques Bertillon.

31. Trois projets de nomenclature des maladies (causes de décès, causes d'incapacité de travail) [Three propositions for a nomenclature of diseases (causes of death, causes of incapacity to labor)], by Dr. Jacques Bertillon.

32. De la méthode à suivre pour dresser une statistique scientifique de la récidive [Concerning the proper mode of compiling scientific statistics of relapsed criminals], by L. Bodio.

Bulletin de l'Institut International de Statistique. Tome IX, 1^{re} Livraison. Luigi Bodio, Secrétaire Général. viii, 124, 54, 125-151 pp.

This bulletin contains the following contributions:

1. Die Lebenskosten belgischer Arbeiter-Familien früher und jetzt: Ermittelt aus Familien-Haushaltrechnungen und vergleichend zusammengestellt [The cost of living of Belgian workingmen's families in former times and at the present day: Based on accounts of household expenses kept by workingmen's families, with similar budgets combined], by Dr. Ernst Engel.

2. Bulletin bibliographique—Annonces des publications statistiques [List of publications relating to statistics].

3. Nécrologies—Friedrich von Hardeck, Henry Heylyn Hayter.

The contribution of Dr. Engel constitutes the introductory chapter of a proposed comprehensive study of the cost of living of workingmen in each of the principal countries of Europe and in the United States. The part here published contains, therefore, not only a very detailed consideration and analysis of the question in Belgium but a valuable introduction giving a general statement of the methods pursued and of the history and literature of all previous attempts to collect and present information concerning the cost of living of workingmen's families.

Album de Statistique Graphique de 1894. Ministère des Travaux Publics. xv pp., 21 charts.

This is the fifteenth issue of an annual album published since 1879 by the minister of public works, showing by means of graphic charts the equipment and operation of railways, the amount and nature of internal water commerce and of maritime commerce, and the operations of the postal and telegraph services.

DECISIONS OF COURTS AFFECTING LABOR.

[This subject, begun in Bulletin No. 2, will be continued in successive issues, dealing with the decisions as they occur. All material parts of the decisions are reproduced in the words of the courts, indicated, when short, by quotation marks, and when long, by being printed solid. In order to save space immaterial matter, needed simply by way of explanation, is given in the words of the editorial reviser.]

DECISIONS UNDER STATUTORY LAW.

CONSTITUTIONALITY OF MECHANIC'S LIEN LAW.—The constitutionality of the mechanic's lien law of Indiana was called in question, and its validity was sustained by the supreme court of the State, November 19, 1895, in the case of *Smith et al. v. Newbauer et al.*, reported in volume 42 of the *Northeastern Reporter*, page 40.

An action was brought by John A. Newbauer and others against Henry B. Smith and others for the foreclosure of a mechanic's lien. From a judgment in favor of the plaintiffs by the circuit court of Blackford County, the defendants appealed to the supreme court, basing the appeal on the ground, among others, that the circuit court erred in overruling their demurrer to the complaint. In passing upon the validity of the statute Chief Justice Howard, delivering the opinion of the court, said:

In support of the demurrer to the complaint it is first contended that the mechanic's lien law of this State is invalid, as repugnant to section 1, article 14, of the Constitution of the United States, which provides that no State shall deprive any person of life, liberty, or property without due process of law. This contention is based upon the provisions of section 3 of the mechanic's lien law (sec. 7257, Rev. Stat., 1894; sec. 1690, Elliott's Supp.), which provides that any person wishing to acquire such a lien upon any property shall file in the recorder's office, "at any time within sixty days after performing such labor or furnishing such materials," notice of his intention to hold such lien. This notice—the only one provided for in the statute—is insufficient, say counsel, to secure that due process of law referred to by the Federal Constitution before the fixing of a lien upon the citizen's property. Under the law as enacted, counsel contend, anyone may perform labor or furnish material in the construction of a building for a landowner, without such owner's knowledge or consent, and then secure a lien upon the land and building by notice filed after the work is done or materials furnished. It is said that the property owner should have notice at or before the doing of the work or the supplying of the materials, so that he may, if he wishes, prevent the doing of such work or the furnishing of such materials, and so keep his property free of the lien.

It has often been held that every statute under which a contract is made enters into and forms a part of such contract. The appellants, in the contract for the erection of the dwelling house upon their property, are therefore chargeable with knowledge of, and are bound by, all the provisions of our mechanic's lien law then in force. By the terms of the agreement entered into, the contractors were to furnish all materials necessary for the construction of the building. This was notice that such materials were to be furnished; and the law under which the contract was made was further notice that the building and ground upon which it was to be erected would be liable to a lien for the value of the materials so furnished. The only uncertainty left was whether those who should furnish the material would claim the lien therefor. That uncertainty is provided for in the statute, which requires that the notice of intention to hold the lien be filed in the recorder's office within sixty days. The owner has, consequently, ample means of protection, and is not liable to a lien without notice, nor to have his property taken without due process of law.

It is intimated that the law hampers the freedom of action of the property owner; that he may desire to pay the contractor in advance, or to pay him by an exchange of other property for the erection of the buildings; and that it may be an inconvenience, or induce the contractor to bid higher for the work, if payment is to be delayed for sixty days after the work is done. These, however, are considerations that should be addressed to the legislature and not to the courts. Besides, it is to be remembered that without the right to a lien on the property laborers and material men would in many cases have no security for their toil or the materials furnished by them. The laborer is worthy of his hire, and the seller of goods ought to be paid for them. As the law stands, all parties are secured in their rights. The owner, by seeing that laborers and material men are paid, or by keeping back for sixty days from the contractor sufficient to make such payment, is in no danger of having to pay twice for his building; while at the same time the man whose labor or materials have gone into the building can look to the building itself, and to the ground upon which it stands, for his security. The property owner enjoys the benefit of this work and of this material, and it is but just that he should be charged for at least sixty days, with the responsibility of seeing that they are paid for.

CONSTITUTIONALITY OF PROPOSED LAW REGULATING THE PAYMENT OF WAGES.—By resolution of the house of representatives of the legislature (general court) of Massachusetts, the supreme judicial court of that State was required to give its opinion upon the following important question of law: "Is it within the constitutional power of the legislature to extend the application of the present law, relative to the weekly payment of wages by corporations, to private individuals and partnerships, as provided in the bill entitled 'An act relative to the weekly payment of wages,' now pending before the general court?"

The opinion of the court, given in reply to the above question, on May 6, 1895, was to the effect that under part 2, chapter 1, section 1, article 4, of the State constitution, which provides that full power and authority shall be given to the general court to make and ordain all

manner of wholesome and reasonable laws, so as the same be not repugnant or contrary to the constitution, as they shall judge to be for the good of the Commonwealth, the legislature has power to extend the application of the present law, relative to the weekly payment of wages by corporations, to individuals and partnerships, and that such legislation is not in conflict with the declaration of rights (articles 1, 12) nor with the fourteenth amendment to the Constitution of the United States.

In the course of the opinion, which is reported in full in volume 40 of the *Northeastern Reporter*, page 713, the court said:

Your question implies that in your opinion the present law relating to the weekly payment of wages by certain corporations to their employees is constitutional, and your inquiry is whether it is within the constitutional power of the legislature to extend the law to private individuals and to partnerships.

We are not informed of the nature of the doubts which your request implies. It is well known that in some of the States of this country legislation similar to that proposed has been held unconstitutional by the courts, sometimes on the ground that it is partial in its character, but more frequently on the ground that it interferes with what is called the liberty of contract, which, it is said, either as a privilege or as property, is secured to the inhabitants of a State by its constitution, or by the Constitution of the United States.

The legislative power granted to the general court by the constitution of Massachusetts is perhaps more comprehensive than that found in the constitutions of some of the other States. The constitution of Massachusetts (part 2, chap. 1, sec. 1, art. 4) provides as follows: "And further, full power and authority are hereby given and granted to the said general court, from time to time, to make, ordain, and establish all manner of wholesome and reasonable orders, laws, statutes, and ordinances, directions and instructions, either with penalties or without, so as the same be not repugnant or contrary to this constitution, as they shall judge to be for the good and welfare of this Commonwealth, and for the government and ordering thereof, and of the subjects of the same, and for the necessary support and defense of the government thereof," etc. There is not in the constitution of Massachusetts anything which in terms relates to the freedom or liberty of contract, as there is concerning the liberty of the press. The constitution declares that "all men are born free and equal, and have certain natural, essential, and unalienable rights; among which may be reckoned the right of enjoying and defending their lives and liberties; that of acquiring, possessing, and protecting property; in fine, that of seeking and obtaining their safety and happiness;" and it is also declared that "no subject shall be arrested, imprisoned, despoiled, or deprived of his property, immunities, or privileges, put out of the protection of the law, exiled, or deprived of his life, liberty, or estate, but by the judgment of his peers, or the law of the land." (Declaration of Rights, articles 1, 12.) This last declaration was taken from *Magna Charta*, and in substance it has been incorporated in the fourteenth amendment of the Constitution of the United States, in form as follows: "No State shall make or enforce any laws which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws."

There has never been at any time in Massachusetts an absolute right in its inhabitants to make all such contracts as they pleased. Some contracts have always been held void at common law, and some contracts valid at common law have been declared void by statute. Our statute of frauds prevents the enforcement in the courts of many kinds of contracts, unless they are shown by a writing, and prohibits the making of certain contracts, and this statute was passed for the protection of persons against fraud and perjury. Seamen have sometimes been regarded as a class of persons who could not be trusted to make their own contracts without supervision, and statutes have been passed making regulations concerning their wages and shipping contracts. (Rev. Stat. U. S., tit. 53.) Wages to a certain amount due for personal labor and services have been exempt from attachment, probably on the ground that it was thought that workmen generally need their wages for their support. Usury laws furnish perhaps the best known illustration of the regulation by statute of the price to be paid for the use of a commodity, but the validity of these laws usually has been regarded as an exception to the general rule. Rev. Stat. Mass., tit. 12, entitled "Of the regulation of trade in certain cases," show various forms of interference by the legislature with what may be called the freedom of trade or of contracts concerning the sale of commodities. The regulation of the subject of fire insurance, and the prohibition of the sale of oleomargarine made in imitation of yellow butter, and the requirement that an agreement to make a will must be in writing, are some of the most recent instances in Massachusetts of the prohibition or regulation of contracts by statute. The constitutionality of much of this legislation has never been questioned, and, when questioned, it generally has been sustained.

In *Frisbie v. United States*, 15 U. S. Supreme Court, 586, that court says: "While it may be conceded that, generally speaking, among the inalienable rights of the citizen, is that of the liberty of contract, yet such liberty is not absolute and universal. It is within the undoubted power of the Government to restrain some individuals from all contracts, as well as all individuals from some contracts. It may deny to all the right to contract for the purchase or sale of lottery tickets; to the minor the right to assume any obligations, except for the necessities of existence; to the common carrier the power to make any contract releasing himself from negligence; and, indeed, may restrain all engaged in any employment from any contract in the course of that employment which is against public policy. The possession of this power by Government in no manner conflicts with the proposition that, generally speaking, every citizen has a right freely to contract for the price of his labor, services, or property."

The decisions of various courts of this country upon the authority of the legislature of a State to prescribe rates for transportation by railroad companies, and in some instances for the use of elevators, have proceeded on the ground that these were public employments; and it is implied in all or nearly all of these decisions that the legislature could not constitutionally prescribe the rates of compensation to be paid for services or for the use of property in exclusively private employments. It is manifest, however, from the examples we have given that the regulation of contracts by statute, not amounting to a determination of rates or prices, has not been confined to public employments, or to business which may be said to be affected with a distinct public interest. The legislation on this subject relates to a great variety of contracts, and has been passed, some of it to promote the public

health or public morals or the public convenience, some of it for the protection of individuals against fraud, and some of it for the protection of classes of individuals against unfair or unconscionable dealing. The considerations which may influence the legislature to determine what legislation of this character is required by good public policy, or in the words of the constitution, what laws are "for the good and welfare of this Commonwealth, and for the government and ordering thereof, and of the subjects of the same," are not for us to weigh, except so far as may be necessary to determine whether the legislation proposed is repugnant or contrary to the constitution. The legislation on similar subjects in Great Britain and in other foreign countries which have no written constitution limiting the powers of the legislature is not in all respects pertinent to the present inquiry; but, considering the history of legislation in England concerning servants or laborers from the earliest times, and the statutes which in modern times have been passed in several foreign countries and many of the States of this country regulating the employment of laborers in factories, we can not say, as matter of law, that the legislation proposed is so plainly not wholesome or reasonable that the general court may not judge it to be for the good and welfare of the Commonwealth. We know of no reason derived from the constitution of the Commonwealth or of the United States why there must be a distinction made in respect to such legislation between corporations and persons engaged in manufacturing, when both do the same kind of business. The existing statutes on the subject, relating to manufacturing corporations, we do not regard as having been passed necessarily in amendment of their charters. They relate to all the corporations described, whether there is any power reserved in the legislature to amend their charters or not, and they do not purport to have been passed for the purpose of restricting the corporate powers of the corporations.

Without attempting to define the limits of the power of the general court in Massachusetts to control the right of its inhabitants to make contracts generally, we can not say that a statute requiring manufacturers to pay the wages of their employees weekly is not one which the general court has the constitutional power to pass, if it deems it expedient to do so. We have not examined in detail the provisions of the bill referred to, nor considered whether the bill may not need amendment to make its meaning clear; but the question submitted, we think, should be answered in the affirmative.

UNLAWFUL PAYMENT OF WAGES.—The Cumberland Glass Manufacturing Company and John F. Perry were convicted before the court of quarter sessions, Cumberland County, N. J., of unlawful payments to employees, in violation of the first section of an act approved March 12, 1880, entitled "An act to secure to workmen the payment of wages in lawful money." (Supplement to the Revision of the Statutes of New Jersey, p. 771.)

The case was carried before the supreme court of the State, which decided, on November 7, 1895, that if a workman agrees with his employer to take pay for his work in part in merchandise, the merchandise so furnished does not constitute a ground of set-off; it is a payment, and goes in diminution of the claim for work; also, that such a

bargain is in violation of the first section of the act above referred to. The court, however, retained the case for future consideration as to the power of the legislature to prevent a workman from contracting as to the character of the compensation to be given him for his work.

The decision of the supreme court, delivered by Chief Justice Beasley, as published in volume 33 of the Atlantic Reporter, page 210, is as follows:

The defendants were convicted before the Cumberland quarter sessions upon an indictment charging them with being engaged in the manufacture of glass, and with unlawfully paying to one John M. Quigg, a workman in the employ of the corporate defendant, the sum of \$81.71 in store goods and merchandise, as and for the wages earned by him while in the employ of said corporation. At the trial it was shown that the workman above named, at the time of his engagement, entered into the following agreement, to wit: "Bridgeton, N. J., July 28, 1890. In consideration of the Cumberland Glass Manufacturing Company furnishing me with groceries, merchandise, and money, I hereby agree to work for them at glass blowing for the blast of 1890 and 1891; and, should I fail to do so, I hereby waive any plea in defense of my obtaining goods and money under false pretenses." The work in question was done and the goods furnished under that contract.

The act alleged to have been violated was the statute entitled "An act to secure to workmen the payment of wages in lawful money," passed in 1880. The first section of this law makes it unlawful "for any glass manufacturer, iron master, foundry man, collier, factory man, employer, cranberry grower, or his agent or company, their agents or clerks, to pay the wages of workmen or employees by them employed in either store goods, merchandise, printed, written, verbal orders or due bills of any kind." By the fourth section it is provided as follows, viz: "That any glass manufacturer, iron master, foundry man, collier, factory man, employer or company offending against the provisions of this act, the same shall be a misdemeanor, and punishable by a fine of not less than ten dollars, or more than one hundred dollars for each and every offense, or imprisonment not to exceed the term of thirty days, at the discretion of the court; but nothing in this act shall apply to or affect any private individual giving orders as aforesaid on a store in the business or profits whereof he has no interest, directly or indirectly, or to the offset of any debt due from such workman to any glass manufacturer, iron master, foundry man, collier, factory man, employer or company where the said debt is voluntarily contracted by the employee or to the payment of any debt due from such workman to any glass manufacturer, iron master, foundry man, collier, factory man, employer, or company."

By an act approved March 13, 1888 (P. L., p. 174), the fourth section of the original was amended so as to eliminate from it the proviso or restrictive clause just recited; and it was the validity of this supplement that forms the topic of the discussion in the briefs of counsel. This argument proceeded on the assumption that the primary act conferred upon the defendants the right to set off merchandise that it had furnished to the employee, and that, if that provision was in force, the defendants were guiltless. But the court is of the opinion that this discussion is irrelevant to the case before us. As has appeared, the exceptive clause in section 4 of the original act relates to set-offs or debts due from the employee to the employer. In the present instance the merchandise furnished did not constitute offsets or debts. By force

of the contract between the parties, they were payments, pure and simple. The legal doctrine on this subject is entirely clear. A set-off is a counter demand growing out of an independent transaction for which an action may be maintained by the defendant against the plaintiff. As, therefore, the defense in this case could not be successfully rested on the last clause of section 4 of the original act, it becomes of no importance for present purposes whether that clause has been repealed or not. It would be a pure waste of time for the court to super-erogate on that subject.

Before closing this branch of the case it is proper to say that we have found no ground on which the conviction of the defendant Perry can be rested. This man's only connection with the transaction is that he was the bookkeeper and a stockholder of the glass company. On account of such relationship he is not responsible for the violation of the act by the company. It is section 4 that denounces the punishment, and, by its express terms, it is the act of the employer himself, and not the act of his agent, that is made the punishable misdemeanor. With respect to this party the judgment must be reversed.

These results dispose of the case so far as it is exhibited in the briefs of counsel; but there is another problem that must be resolved before the court can finally decide upon the alleged criminality of the defendant. That question is whether the legislature, in enacting the law of 1888, did not exceed its authority. It is obvious that the general effect of this statute is to prevent a workman who is entirely sui juris from stipulating as to the character of the compensation to be given him for his work. The inquiry thus arising is one of great importance, touching, as it does, one of the essential rights of the citizen and the extent of the legislative authority, and therefore should not be settled except upon the fullest consideration. The result is that the case will be retained, so that counsel can send in briefs on the point thus reserved.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES.—In an action by Charles Mitchell against the Northern Pacific Railroad Company to recover damages for injuries received while in the performance of his duty as an employee of said company, through the negligence of fellow-servants, the United States circuit court, district of Minnesota, fifth division, decided on October 31, 1895, that under section 1, chapter 13, of the laws of 1887 of Minnesota, Mitchell was entitled to recover damages.

The opinion of the court, delivered by Judge Nelson, as published in volume 70 of the Federal Reporter, page 15, is as follows:

By consent of parties, this case was submitted to a referee to report findings of fact and conclusions of law; and, upon confirmation thereof by the court, judgment to be entered accordingly. The referee reported in substance that plaintiff, on the 25th day of February, 1893, was employed as a car cleaner for defendant at Staples, Minn., and while so engaged inside a passenger coach on a side track, another coach was kicked in against it at a dangerous and unusual rate of speed by a switching crew, consisting of a locomotive engineer, fireman, foreman, and helpers; that, by reason thereof, plaintiff was injured, without negligence on his part; and damages were awarded him in the sum of \$1,500.

Exceptions were filed to the report by defendant's counsel, and, upon due consideration of the case, I am of opinion that there is sufficient evidence to warrant the findings of fact and conclusions of law arrived at by the referee, and the amount awarded is not excessive. The report of the referee is therefore confirmed, and judgment will be entered accordingly.

The general rule, in the absence of a controlling statute, is that an employee, in the performance of certain specified duties, assumes all the natural and ordinary risks and hazards incident thereto, and those arising from the negligence or carelessness of his fellow-servants are no exception. Mitchell and those composing the switching crew were fellow-servants, and defendant would not be liable unless plaintiff comes within the provisions of the statute of Minnesota, modifying the common-law rule, which reads as follows: "Every railroad corporation owning or operating a railroad in this State shall be liable for all damages sustained by any agent or servant thereof, by reason of the negligence of any other agent or servant thereof, without contributory negligence on his part, when sustained within this State."

This statute has been construed to apply, not to all railroad employees, but only to those exposed to and injured by the dangers peculiar to the use and operation of railroads. (*Pearson v. Railroad Company*, 49 N. W., 302; 47 Minn., 9, and cases cited.)

The question, then, is, Does the plaintiff come within this rule? It has been held that a car repairer or section man injured by the act of a fellow-servant in carelessly and negligently running him down with a car can recover for such injury, as being exposed to the hazards and dangers incident to railroading; and I see no reason why this plaintiff, under the circumstances, was not exposed in like manner. I hold that the plaintiff is within the terms of the Minnesota statute, and therefore can recover in this action.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES.—Section 193, article 7, of the constitution of Mississippi, which establishes the responsibility of railroad corporations for injuries of employees, provides that "knowledge, by any employee injured, of the defective or unsafe character or condition of any machinery, ways, or appliances shall be no defense to an action for injury caused thereby, except as to conductors or engineers in charge of dangerous or unsafe cars or engines voluntarily operated by them."

This constitutional provision was construed by the supreme court of Mississippi, in the case of *Buckner v. Richmond and Danville Railroad Company et al.*, on May 27, 1895, and it was held as not precluding such knowledge by an employee, as a fact controlling the degree of care to be exercised by him under the circumstances. from being admissible to show contributory negligence.

The decision in this case is reported in volume 18 of the *Southern Reporter*, page 449. In the opinion, delivered by Judge Campbell, the following language is used in regard to the effect of the provision referred to:

The effect of this is not to destroy the defense of contributory negligence by a railroad company, but to merely abrogate the previously

existing rule that knowledge by an employee of the defective or unsafe character of the machinery or appliances shall not, of itself, bar a recovery. The law was that knowledge by an employee of defective appliances, which he voluntarily used, precluded his recovery for an injury thus received. The constitution destroys that rule, and the mere fact that the employee knew of the defect is not a bar to a recovery; but knowledge by an employee of defects is still an element or factor—and a very important one—in determining whether, with the knowledge he had, he used that degree of caution required in his situation with reference to the appliances causing his injury. The constitution did not have the effect to free employees of railroad companies from the exercise of ordinary caution and prudence. It does not license recklessness or carelessness by them, and give them a claim to compensation for injuries thus suffered. They, like others not employees, must not be guilty of contributory negligence, if they would secure a right of action for injuries. The fact of knowledge of defects shall not, as heretofore, be a defense, but the same rule that applies to others applies to them. They must use the degree of caution applicable to the situation, for the absence of this is negligence, and, if it contributed to the injury, no recovery can be had by an employee, any more than by one not an employee. It was not the purpose of the makers of the constitution to place employees on a more favorable footing as to this than others, but simply to free them from the bar before held to arise from the fact of knowledge of defective conditions. It is not a defense, but it is a fact or circumstance for consideration, among others, in order to determine the presence or absence of contributory negligence, which is yet a defense, as it was before, but is not to be made out against an employee by the mere fact of his knowledge.

THE FELLOW-SERVANT ACT OF TEXAS.—Chapter 24 of the acts of 1891 of Texas, entitled “Fellow-servants,” provided, in section 2, “that all persons who are engaged in the common service of such railway corporations and who, while so engaged, are working together at the same time and place to a common purpose, of same grade, neither of such persons being intrusted by such corporations, with any superintendence or control over their fellow-employees, are fellow-servants with each other; provided, that nothing herein contained shall be so construed as to make employees of such corporation, in the service of such corporation, fellow servants with other employees of such corporation, engaged in any other department or service of such corporation. Employees who do not come within the provisions of this section shall not be considered fellow-servants.”

The chapter above referred to was repealed by chapter 91 of the acts of 1893, by which the section quoted was practically reenacted and its scope extended so as to include, in addition to the employees of any railway corporation, the employees of the “receiver, manager, or person in control thereof.”

The foregoing legislation was considered by the court of civil appeals of Texas, November 6, 1895, in the case of the San Antonio and Aransas

Pass Railway Company v. Keller (vol. 32, *Southwestern Reporter*, p. 847), brought before the court, on appeal by the company, from the judgment of the district court of Bexar County, by which \$5,000 had been awarded Keller, a car repairer employed by the company, as compensation for injuries received by him in a collision while on a car under orders to proceed to the scene of a wreck to assist in repairing damages.

The court of civil appeals held that the repeal of the act of 1891, under which Keller's right to recover damages accrued, by the act of 1893, which substantially reenacted it and amplified its scope, did not deprive him of any right he had already acquired; also that in the trial of the case it was proper for the jury to consider the reasonable value of the time lost, the necessary money expended for medical attendance, the physical and mental pain, and for such injuries as were permanent to award such a sum as would be a fair compensation therefor; also that a car repairer working in a separate yard from a "hostler" is not a fellow-servant of such hostler nor of the switchmen in such other yard, particularly while on a car under orders to proceed to another place and assist in repairing damages caused by a wreck.

In the course of the opinion affirming the judgment of the lower court, delivered by Judge Fly, it is said:

We conclude from the statement of facts that in December, 1892, appellee, who was a healthy man, in full possession of the faculties of his body, and was an employee of appellant, receiving from \$1.50 to \$1.75 per day, was injured by reason of a collision of the cars of appellant. The collision occurred on account of the failure of appellant to properly light its yards, and by the negligence of its employees who were not the fellow-servants of appellee. The injuries received by appellee were permanent, and have totally incapacitated him from labor. He has suffered great bodily pain since the injuries were inflicted. He was 45 years old when injured, and had a life expectancy of 24 years.

The right to recover damages accrued under the act of 1891, and the repeal of that law by the act of 1893 did not deprive appellee of any right he had already acquired. Not only had the right accrued, but the suit was filed before the enactment of the law of 1893. The latter act was simply an amplification of the scope of the law, and there was evidently no intention on the part of the legislature to interfere with rights acquired under the provisions of the amended statute. The only material difference between the acts of 1891 and 1893 was the extension of the scope of the law so as to include within its purview railway corporations operated by a receiver, manager, or any other person. There was at the time of the repeal of the former act a reenactment of the provisions upon which the right of action of appellee is founded. It is a familiar rule of construction that when statutes are repealed by acts which substantially retain the provisions of the old laws, the latter are held not to have been destroyed or interrupted in their binding force.

The following charge was given by the court: "Should you find for the plaintiff under the foregoing instructions, then, in measuring the damages, if any, he has sustained, you may take into consideration the reasonable value of the time lost, if any, consequent upon his inju-

ries; the necessary sums of money, if any, expended by him for medical attendance and medicines, if any, rendered necessary by his injuries; the physical and mental pain, if any, consequent upon his injuries received; and if you believe from the testimony plaintiff's injuries, if any, are permanent, and will disable him to labor and earn money in the future, you may, in addition to the above, find such sum as will be a fair compensation for his future diminished capacity to labor and earn money." The charge gives the correct measure of damages.

Appellee was not a fellow-servant of either Kinchelow or the switchman. They were not "working together at the same time and place, to a common purpose." While engaged in their ordinary every day labor they were not fellow-servants. Kinchelow, who was in charge of the engine when the collision took place, was the "hostler," whose duty it was to receive incoming locomotives, and carry them to the roundhouse, and take outgoing locomotives from the roundhouse and deliver them to the engineers. Appellee was a car repairer, working in a separate yard. The switchman was also in another department of the service, and had no labor in common with appellee. At the time the collision occurred and the injuries were inflicted appellee was on a car, under orders to proceed to Beeville to assist in repairing damages caused by a wreck, and the mere statement of this fact demonstrates that he was not working at that time and place to a common purpose with either the "hostler" or switchman.

DECISIONS UNDER COMMON LAW.

EMPLOYERS' LIABILITY.—In the case of *Burke et al. v. Anderson*, the United States circuit court of appeals, seventh circuit, on October 7, 1895, affirmed the judgment of the United States circuit court for the western district of Wisconsin, by which \$4,000 damages were awarded T. Knut Anderson for personal injuries caused by an explosion of dynamite under the following circumstances: Matthew C. Burke was a contractor, engaged in making a roadbed for a railroad, and his codefendant, John Burke, had sole charge of the work for him as general manager and superintendent. The work was carried on by blasting the frozen ground with dynamite and other explosives and afterwards breaking it up with picks, John Burke having personal charge of the blasting. Anderson, a common laborer, unfamiliar with the use of explosives, was hired by John Burke and set to work digging with a pick at a spot where the blasting had been done the day before, without warning or knowledge of possible danger. Anderson was injured by an explosion caused by striking with his pick a piece of dynamite remaining from the blast, which was found to have been negligently conducted.

The court held that, as Matthew C. Burke had created the risk due to the presence of explosives for his own purposes, and was bound not only to exercise the utmost care and every available precaution against possible injury to the workmen, but to give them warning of the risk,

and as Anderson was ignorant of the risk when he undertook the work of digging, Burke was liable to him for the injury suffered.

The decision delivered by Judge Seaman, as reported in volume 69 of the Federal Reporter, page 814, is based on the following reasoning:

The question in this case upon which the liability of the principal defendant, Matthew C. Burke, depends, is this: What is the rule of care to be applied to an employer of labor who uses explosives or other dangerous means in the prosecution of the work in which the laborer is engaged? The liability of Matthew C. Burke is asserted on the doctrine of respondeat superior, and based upon the alleged negligence of John Burke (1) in so carrying on the blasting, or using the dynamite and powder, that an unexploded portion was left in the ground; and (2) in sending the plaintiff into the place where this danger lurked, without warning of its existence and without sufficient precautions to guard against injury. The counter proposition, on which Matthew C. Burke claims exemption from any liability, is substantially this: That the work of blasting and removing any unexploded charge was "not the personal duty of the master, but only the work of an operative," and consequently any negligence therein of John Burke was in the character of fellow-servant, a risk assumed by the plaintiff, which precludes recovery against the master.

This conflict must be resolved in accordance with the general rule which is clearly pronounced in the recent decision by the Supreme Court of the United States in the case of *Mather v. Rillston* (156 U. S., 391). In affirming the judgment, the court, speaking unanimously through Mr. Justice Field, states the doctrine applicable here:

"All occupations producing articles or works of necessity, utility, or convenience may undoubtedly be carried on, and competent persons, familiar with the business, and having sufficient skill therein, may properly be employed upon them; but in such cases, where the occupation is attended with danger to life, body, or limb, it is incumbent on the promoters thereof and the employers of others thereon to take all reasonable and needed precautions to secure safety to the persons engaged in their prosecution; and for any negligence in this respect, from which injury follows to the persons engaged, the promoters or the employers may be held responsible and mulcted to the extent of the injury inflicted. The explosive nature of the materials used in this case * * * was well known to the employers, and was a continuing admonition to them to take every precaution to guard against explosions. Occupations, however important, which can not be conducted without necessary danger to life, body, or limb, should not be prosecuted at all without all reasonable precautions against such dangers afforded by science. The necessary danger attending them should operate as a prohibition to their pursuit without such safeguards. * * * If an occupation attended with danger can be prosecuted by proper precautions without fatal results, such precautions must be taken by the promoters of the pursuit or employers of laborers thereon. Liability for injuries following a disregard of such precautions will otherwise be incurred, and this fact should not be lost sight of. So, too, if persons engaged in dangerous occupations are not informed of the accompanying dangers, by the promoters thereof, or by the employers of laborers thereon, and such laborers remain in ignorance of the dangers and suffer in consequence, the employers will also be chargeable for the injuries sustained."

In the case at bar the only explicable cause of injury to the plaintiff was the presence in the ground of some remnant of the explosives

which had been employed in blasting. The danger was not inherent in his work; was not one to be anticipated in the labor with pick and spade in a gravel cut for which he was hired; it was not of natural or purely accidental origin, but was produced by the act or requirement of the master in using a dangerous agency to advance his undertaking. Except for the explosive materials carried there for the master's purposes, the plaintiff could have worked safely in the place to which he was assigned. The testimony is undisputed that he had engaged in the work only three days before, had no experience in or knowledge of the use or danger of explosives thus employed, and had no information or suspicion that danger was incurred by digging in this ground. He obeyed the express order of the superintendent to enter and work there, relying, as he had a right to rely, upon the implied assurance of the master that the place was reasonably safe; that there was no other danger there "than such as was obvious and necessary." The master provides the place for his servants to work, and if his acts create special danger, he is not alone chargeable with the positive duty to exercise the utmost care and every available precaution against possible injury to those who are to work there; but if danger impends notwithstanding the precautions taken, he is further obligated to give due information and timely warning to those in his service who are ignorant of its extent before calling upon them to incur the risk.

In respect of the employment of the plaintiff and the directions for his work, it is unquestionable and conceded that the superintendent represented the master as vice-principal. In the same relation he is chargeable with knowledge of the danger in using explosives, and with the duty to protect employees and notify them of risk. If the plaintiff was not informed of the peril which compliance with the order involved, or it was not clearly apparent, the risk thus created can not be held to have been contemplated in the service in which he was engaged, and therefore it was not one assumed by him in his employment. The instructions requested on behalf of the principal defendant, and the theory of the whole defense as well, rest upon the claim that the operation of blasting was common labor, and not the work of a superintendent or vice principal; that its performance by the superintendent was in the character of a fellow-servant, and the master was not liable for any neglect therein beyond the exercise of ordinary care in selecting his servants. In the same connection it is argued that the use and care of the explosives was not a personal duty of the master.

It is sufficient that the risk was created by the master or for his purposes; that there is legitimate finding by the jury of negligence on the part of those engaged in the performance, causing the injury; and, finally, that the plaintiff was ignorant of the risk, and had not assumed it. The doctrine which exempts the master from liability arising out of the negligence of fellow-servants is based upon the assumption by the servant of the ordinary risks of his employment, in which the negligence of fellow-servants is included, but it has no application to risks which are not contemplated by him in entering upon the service, and certainly can not govern for this extraordinary risk interposed by the master without warning.

EMPLOYERS' LIABILITY—MINING COMPANIES.—In the case of *Western Coal and Mining Company v. Ingraham*, the United States circuit court of appeals, eighth circuit, on September 16, 1895, affirmed the judgment of the circuit court of the United States for the western

district of Arkansas, by which damages were awarded Ingraham for injuries received while in the performance of his duty as an employee of the mining company, under the following circumstances: The roof of the mine had been timbered or propped by other miners months before the plaintiff, Ingraham, went to work in the mine, who was set to work by the mining boss "pulling a pillar" in the mine, and, while so at work, the timbers or props which supported the roof of the mine in the room in which he was at work and which were set by other miners two months or more before he commenced work, were knocked down by a mule attached to a car used to haul coal out of the mine, and thereupon rocks and slate fell from the roof of the mine upon the plaintiff and inflicted the injuries complained of. The props would not have been knocked down or fallen if they had been properly set in the first instance, and an inspection of them by a reasonably capable mining boss or inspector would have disclosed the fact that they were insufficiently and defectively set, and rendered the mine insecure and dangerous to work in. The mule which knocked the props down was ungovernable and vicious, and that fact was known to the defendant. The plaintiff was in the exercise of due care when he was injured, and no negligence of his, in any degree, contributed to the accident.

The decision in this case is reported in volume 70 of the Federal Reporter, page 219. The opinion of the court was delivered by Judge Caldwell, who in the course of it said:

The contention of the defendant is that the defect in the timbering of the mine was the result of the negligence of the miners, who opened and timbered the room, and of the pit or mine boss, and that, as these persons were the fellow-servants of the plaintiff, he can not recover. But upon the conceded facts of the case the fellow-servant doctrine has no application to this case. The issue was whether the defendant had discharged his duty to the plaintiff in furnishing him with a reasonably safe place in which to work. The mine had been timbered long before the plaintiff went to work therein, and the accident resulted from a defect in that timbering. It is not claimed that the plaintiff had anything to do with this timbering, or that it was any part of his duty to inspect or repair the same. Whatever may be the duty of coal miners with reference to timbering the slopes and roofs of the rooms from which they remove coal, the rule is well settled that, after a mine is once opened and timbered, it is the duty of the owner or operator to use reasonable care and diligence to see that the timbers are properly set, and keep them in proper condition and repair. For this purpose it is his duty to provide a competent mining boss or foreman to make timely inspections of the timbers, walls, and roof of the mine, to the end that the miners may not be injured by defects or dangers which a competent mining boss or foreman would discover and remove. This is a positive duty which the master owes the servant. A neglect to perform this duty is negligence on the part of the master, and he can not escape responsibility for such negligence by pleading that he devolved the duty on a fellow-servant of the injured employee. It is an absolute duty which the master owes his servant to exercise reasonable care and diligence to provide his servant with a reasonably safe place in which to work, having regard to the kind of work and the conditions under

which it must necessarily be performed; and whenever the master, instead of performing this duty in person, delegates it to an officer or servant, then such officer or servant stands in the place of the master, and the negligence of such officer or servant is the negligence of the master; and any servant injured by such negligence may recover from the master for such injury regardless of the relation the injured servant sustained to the officer or servant whose negligence resulted in inflicting the injury.

Upon the facts of the case, therefore, and the issue as it was presented to the jury, the question whether the "pit boss" was a fellow-servant of the plaintiff was wholly immaterial, and the court might well have rejected all evidence and all instructions relating to that question. It was not the negligence of the pit boss, but the negligence of the master in not furnishing a reasonably safe place to work that was complained of. The duty rested on the master to exercise reasonable care and diligence to furnish the plaintiff a reasonably safe place in which to work, and the master is not relieved from responsibility for failing to perform this duty because he saw proper, instead of performing it himself, to intrust its performance to a servant who neglected the duty. The servant's negligence in such cases is the negligence of the master.

Upon the subject of the part the mule played in the accident * * * it would require a great stretch of the rule which the defendant attempts to invoke to say the plaintiff should have anticipated that this mule might at some time be brought to the room in the mine where the plaintiff was at work, and that, while there, the mule would come in contact with the timbers which supported the roof of the mine, and knock them down, because they were insecurely set, and that as a result of all this the roof would fall, and he might be injured, and that, anticipating all this, he ought to have quit the defendant's service. The case does not call for any discussion of what is a primary, proximate, or remote cause. Here all the causes of the accident, whether remote or proximate, were the result of the defendant's negligence, which the plaintiff was not required to anticipate.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES.—In an action by Hattie Frost against the Oregon Short Line and Utah Northern Railway Company to recover damages for the death of her husband, James W. Frost, who was an engineer in the employ of said company and who was killed in a collision in Montana while in the performance of his duty, the plaintiff recovered a verdict, whereupon the railway company moved for a new trial, basing the motion on the refusal of the court to instruct the jury to bring in a verdict for the defendant on the ground that the company was not liable for the death of Frost, the engineer, as his death was due to the negligence of a fellow-servant, and on the instruction given by the court to the jury to the effect that the employee through whose negligence the collision occurred was the representative of the company, and that his acts and negligence were the acts and negligence of the company.

The motion for a new trial was denied by the United States circuit court, district of Montana, S. D., on September 24, 1895. The circumstances of the case and the decision of the court rendered by

Judge Knowles are reported in volume 69 of the Federal Reporter, page 936. A synopsis of the same is herewith given, as follows: On February 1, 1891, one of defendant's passenger trains, termed "No. 5," on which James W. Frost was engineer, was running northward on the railroad track of the defendant toward the city of Butte, Mont., and on the same day there was another train, termed "No. 32," running southward on said track from said city of Butte to Dillon, Mont. Train No. 5 was running on schedule time and train No. 32 was behind time. The train dispatcher of the company, having his office at Pocatello, Idaho, finding that train No. 32 was behind time, sent an order by telegraph to the conductor of said train, directed to a station on the line of the road called Glenn, to go to Dillon, using the time of train No. 5. At the same time he sent an order to Dillon to the conductor of train No. 5 to stop at Dillon 2.45 P., for train No. 32. The telegraph operator, Stuerer, at Dillon did not give the conductor of train No. 5 this order, as he was required, and he did not change the signals at the Dillon Station, as required by the rules of the company. Signal white, which was displayed, signified that the track was clear. Had he displayed red, as he should have done, it would have indicated that the train was to stop for orders. In consequence of this failure to give the conductor of train No. 5 the order of the train dispatcher, and of his failure to display the signal red, train No. 5 proceeded north from Dillon on the regular schedule time, and at a short distance north from said place collided with said train No. 32, and on account of this collision Engineer Frost received such injuries as caused his death. It seems that the telegraph operator, Stuerer, received the dispatch from the train dispatcher at Pocatello, repeated the same back to said train dispatcher, and received the dispatch "O. K.," which indicated that the order received at Dillon was correct. Upon this state of facts the court rendered its decision, from which the following is quoted:

Under these circumstances there can be no doubt but that the said Frost was killed on account of the negligence of said telegraph operator at Dillon.

The point involved in the position taken by the court is: Was the telegraph operator at Dillon a fellow-servant of Frost, or was he, in the matter of notice of a change of running time of the train upon which Frost was an engineer, performing a duty which the said railway company was required to perform itself, and could not intrust to another without said other person representing the said company and acting for it? If the said operator was only a fellow-servant of Frost in the matter of giving notice of the change of the time of running trains, then the company was not liable for his negligence. Frost, as an employee of the said railway company, undertook as one of the risks of his employment, that he would suffer the consequences arising from the negligence of a fellow-servant in a common employment with him, and that the railway company should not be responsible therefor.

It is conceded that it was the duty of the railway company to establish the time for running trains, the hour of their departure and arrival

at stations, and their speed. This is usually done by the train dispatcher establishing what is termed a "time-table." This is the act certainly of the company. If a time-table is changed temporarily, this must be done by the train dispatcher. He acts in both cases in the name of the superintendent of the company or of its road. A railway company, however, does not perform its whole duty to its employees when it establishes a time-table, either general or temporary. It should exercise reasonable care, under all the circumstances, to bring this time-table to the notice of all persons who are charged by it with the operating of trains on its railway track. The notice of a temporary change in a time-table is as necessary as the notice of the general time-table. There is more danger to be apprehended from the establishment of a temporary time-table when a general one has been in use than from the establishing of a general time-table in the first place.

When the act to be performed is one which it was the duty of the railway company, as master, to execute, can it, in any way, transfer this duty to another, and exonerate itself from liability in case this other person is negligent in its performance? I think, under established Federal authority, it can not.

Under what head of the list of duties required of a master toward his servant shall we place the duty of a railroad company to establish time-tables, and give notice thereof to those engaged in managing and running trains? I apprehend we must class that duty under the head of the obligation of the master to provide a suitable place for his servant to work in. This being the case, the duty of giving notice to those running a train devolves upon the railroad company, and those who undertake or are intrusted with this office personally represent it. A master can not delegate the duty of providing a safe place in which his servant is called upon to work, so as to escape responsibility, if there is a want of proper care in providing such place.

In this case it is admitted that the establishing of a temporary time-table is the work of the railroad company, and the duty of giving notice of any time-table, general or temporary, devolves upon it. How can it be claimed then that in one case more than another this duty of the master can be turned over to a fellow-servant of those who are operating his trains, and be relieved from liability? The duty of giving notice in both classes of time-tables is the duty of the master, and the master can not delegate his duty to another without being responsible for his negligence. Under this rule the telegraph operator Stuerer at Dillon must be considered as representing the company in the duty assigned him of giving notice of the temporary change of the time-table, or in transmitting the notice, intrusted to him to deliver to the conductor of train No. 5, of the change in the time-table. In doing this duty he was not a fellow-servant of those operating the road, but a personal representative of the company, for whose negligence the company was responsible.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES.—The supreme court of Pennsylvania decided, on October 7, 1895, in the case of *Elkins v. Pennsylvania Railroad Company*, that a railroad company is responsible for injuries suffered by one of its brakemen, through a defect in the steps of a freight car, while acting as one of a crew sent to a shipper's

yards to shift cars preparatory to their being taken into the company's trains.

The circumstances of the case, and opinion of the court, delivered by Judge McCullom, reported in volume 33 of the Atlantic Reporter, page 74, are as follows:

The plaintiff was injured while in the service of the defendant company as a brakeman. The injury he received was due to a defect in the step of a freight car on which he was attempting to get, in the performance of the duties of his employment. It is settled by the verdict that no fault of his contributed in producing it. The car belonged to, and was in the yard of, the Atlantic Refining Company. The plaintiff was one of a crew sent into the yard by the defendant company to shift some cars there. The superintendent of the refining company directed what cars should be shifted, and where they should be placed. It was while the crew were engaged in the work they were sent to do that the plaintiff received the injury for which he seeks compensation in this action. The cause of it has already been stated. If he had received it from the same cause while transporting the car from one point to another on the defendant company's road, the liability of his employer to compensate him for it could not be successfully questioned. In the recent case of *Dooner v. Canal Company* (164 Pa. Stat., 17; 30 Atl., 269) this subject was fully considered in an opinion by our brother Dean, who in the course of it said: "The measure of duty of the receiving road, as to cars turned over to it for transportation by connecting roads, is settled by many cases. It is bound to make such inspection as the nature of the transportation requires, and if it pass and haul cars faulty in construction, or dangerously out of repair, it is answerable to its own employees who are thereby injured."

If the defendant company is responsible to its employees for the condition of the cars it receives for transportation over its own lines, why is it not so for the condition of the cars it requires them to shift from one place to another on the tracks and in the yard of the refining company? They are as clearly in its service in the latter case as in the former. Their work is of the same nature in one case as in the other, and the risks attending it are the same. No sufficient reason appears for discriminating between the liability of a railroad company for injuries to its employees in handling upon its own line the cars of another corporation which are "faulty in construction, or dangerously out of repair," and its liability to them for injuries in handling such cars by its orders elsewhere. It is not the ownership of the cars, or of the line on which they are moved, that imposes the liability upon the company, but it is the handling or shifting of them by its orders.

The defendant company was not bound to shift the cars in the yard of the refining company without a previous inspection of them. If the latter refused to allow an inspection, the former could have properly declined to engage in the work of shifting them. But, having done the work, it is responsible to its employees for injuries caused by the unsafe condition of the cars they were required to handle.

CONTRACT OF EMPLOYMENT.—In the case of *Hermann v. Littlefield* (reported in volume 42 of the *Pacific Reporter*, page 443) the supreme court of California decided, on October 9, 1895, that a contract by which an employee agrees to devote his whole time and services to the interest of his employer is not broken by doing a little work for other parties on holidays and at night, such work not resulting in damage to the employer; also, that when a person performing labor at an agreed price and for a stated time continued in the same employment after the expiration of the term without a new agreement, it is presumed that the terms of the original contract were continued, and the original contract is admissible as evidence in a suit by the employee to recover the wages earned since the expiration of the time covered thereby.

The facts in the case are stated in the opinion delivered by Judge Garoutte, which is as follows:

This is an action in assumpsit for work and services performed by plaintiff in assisting defendant in conducting and carrying on the business of an architect. Judgment went for plaintiff, and this appeal is prosecuted from such judgment, and from the order denying the motion for a new trial.

In the year 1887 the parties entered into a written contract, by the terms of which Hermann agreed to give his services "as a draftsman and assistant architect during the necessary and reasonable working hours of each working day, for the term of three years." Hermann also agreed "to devote his whole time and services to the interest of Littlefield's business as a draftsman and assistant architect, to use at all times his utmost reasonable exertion in and for the true and best interests of Littlefield's business, as if he were a partner with him." This agreement expired in due course of time, and plaintiff continued to remain in the employment of the defendant, and performed the same character of services thereafter as before such expiration. By his answer, defendant claimed that plaintiff had made a substantial default in the performance of the terms of the contract upon his part to be performed, and asked for damages. The court, by its finding of fact, declared, in effect, that plaintiff had performed the contract as agreed upon, and further found that during the time of his employment he performed work for persons not clients of defendant, from which employment he had received the compensation of \$178; and it thereupon deducted that sum from the amount found due to plaintiff, and ordered judgment for the balance.

It is contended that the court committed an error in admitting the original written contract in evidence. We think there is no weight in the contention. The writing was clearly admissible, as showing the terms of the contract under which plaintiff performed the labor. It is elementary that when a person performing labor at an agreed price and for a stated time continues in the same employment after the expiration of the term, without a new agreement, it is presumed by the law, in the absence of anything to the contrary, that the terms of the original contract are continued; and the fact that the present action is one in the nature of assumpsit in no way deprives the plaintiff of the right to introduce the contract in evidence.

The findings of fact as to the performance of the contract by plaintiff are fully supported by the evidence. We see nothing in the record dis-

closing any substantial breach thereof. Plaintiff appears to have done some work for other parties during Sundays, holidays, and at night; but the amount of this labor was trivial, with a single exception, and in no way resulted in damage to defendant, nor in any way interfered with his business. We see no more cause of complaint by defendant in this regard than though plaintiff had passed the time so occupied in harmless amusement. The court allowed the defendant the benefit of the money received by the plaintiff from this outside work. Whether or not there was justification for this action of the court is immaterial upon the present appeal, for certainly there can be no cause of complaint upon the part of defendant based thereon. A modification of the judgment in this respect could hardly be desired by him.

EXTRACT RELATING TO LABOR FROM THE NEW CONSTITUTION OF SOUTH CAROLINA.

The new constitution of the State of South Carolina, ratified December 4, 1895, in a convention held at the city of Columbia, contains the following provisions relating to labor:

ARTICLE V, SECTION 33. Circuit courts and all courts inferior thereto and municipal courts shall have the power, in their discretion, to impose sentence of labor upon highways, streets, and other public works upon persons by them sentenced to imprisonment.

ARTICLE IX, SECTION 15. Every employee of any railroad corporation shall have the same rights and remedies for any injury suffered by him from the acts or omissions of said corporation or its employees as are allowed by law to other persons not employees, when the injury results from the negligence of a superior agent or officer, or of a person having a right to control or direct the services of a party injured, and also when the injury results from the negligence of a fellow-servant engaged in another department of labor from that of the party injured, or of a fellow-servant on another train of cars, or one engaged about a different piece of work. Knowledge by any employee injured of the defective or unsafe character or condition of any machinery, ways or appliances shall be no defense to an action for injury caused thereby, except as to conductors or engineers in charge of dangerous or unsafe cars or engines voluntarily operated by them. When death ensues from any injury to employees, the legal or personal representatives of the person injured shall have the same right and remedies as are allowed by law to such representatives of other persons. Any contract or agreement, expressed or implied, made by any employee to waive the benefit of this section shall be null and void; and this section shall not be construed to deprive any employee of a corporation, or his legal or personal representative, of any remedy or right that he now has by the law of the land. The general assembly may extend the remedies herein provided for to any other class of employees.

ARTICLE XII, SECTION 6. All convicts sentenced to hard labor by any of the courts of this State may be employed upon the public works of the State or of the counties and upon the public highways.





